

Bob Cooper's

AUGUST 15 2005

SatFACTS

MONTHLY



Reporting on "The World" of satellite television in the Pacific and Asia

IN THIS ISSUE

Out of Market
DTT system
for Australia

Slingbox:
Any TV -
anywhere?

Cellphones
as
"Third Screen"

- ✓ Latest Programmer News
- ✓ Latest Hardware News
 - ✓ 'Wireless' Irdeto
 - ✓ Observer Reports

Vol. 11 ♦ No. 132
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Hualin Pty Ltd

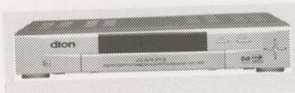
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Import and wholesale

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Email: sales@hualin.com.au Web: www.hualin.com.au

For all prices, product information and banking details please visit the website or phone us.

Specials this month

DT800PVR - Digital Receiver



- 40Gb HDD = 40hr Record time
- 2x CI CAM Slots
- DiSEqC 1.2
- **Fibre Optic Output Capability**
- Price: \$390 AUD + GST

Satlook - Signal Meter



- Digital, Analogue and combined versions available
- A must for the professional
- Simple menus and functions
- Price: Phone up for Quote

DreamMAX - DT470



- Irdeto embedded
- 4900 Channel Memory
- DiSEqC 1.2
- User Friendly
- Price: \$200 AUD + GST

Everything? Yeah we got

LNBF

- Zinwell C Band
- Zinwell KU Band
- MTI C Band, Superhigh gain
- One Cable Solution - CBand
- Dual Output KU 11300 MHz

Positioners

- Superjack EZ-2000
- Superjack DP-6600, DiSEqC 1.0/1.2
- Technosat DP-200, DiSEqC 1.2
- Manual Actuator Driver - EW101
- SAP 2000: 99 Memory positioner

Actuators

- Superjack HARL-3618, 18" Actuator
- Superjack HARL-3624, 24" Actuator
- Superjack DG-120, H/H Mount

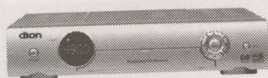
Receivers

- SuperNET CA, Irdeto Embedded
- Success, Free-to-Air
- Dion DT-370, Free-to-Air Receiver
- Dion 2x CI, Hardware AllCAMed
- ChangHong, Mediaguard embedded
- SuperNET Terrestrial, DVB-T
- Phoenix High Definition STB

Dish and mounts

- 1.2, 1.8m Solid Prime focus
- 45, 60, 65, 85cm KU dish Offset
- 2.13m, 2.27m, 2.4m, 3.0m, 3.07m, 3.7m, Mesh Dish, Light and Heavy Duty PSI and JOYSAT Available
- CBand Wall brackets
- CBand Concrete mounts and stands
- KU Gutter mounts
- KU Wall mounts
- KU Float mounts
- KU Tinroof mount

Dion 818 CI - Digital Satellite Receiver



- Slim Size and User Friendly OSD
- 2x CI (Common Interface) slots
- Hardware AllCAMed

SuperJack H-H Actuator, DiSEqC embedded



- All it takes is one coaxial cable....
- NO MOTOR CABLE REQUIRED**
- DiSEqC Positioner EMBEDDED!

Supernet - Terrestrial DVB-T



- Digital Terrestrial Receiver
- Slim Design
- High Quality Picture
- Easy to install and use

Dion316 - Digital Satellite Receiver



- FTA + Software Patched
- 4000 Channel Memory
- DiSEqC 1.0/1.2 Compatible
- Price: \$170AUD + GST

Switches and Splitters

- 2 and 4 way DiSEqC switches
- 0/22kHz switches
- 2 and 4 way cable splitters
- V/H Multiswitch
- 0/12V Switch

Cable - 15m, 25m, 305m packs

- RG6-U Dual Shield Coaxial Cable
- RG6-U Quad Shield Coaxial Cable
- Cat5 Actuator Cable

Plugs

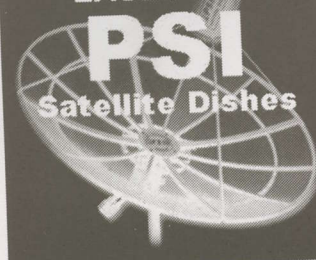
- F Connectors, Screw or Clamp types
- Cable joiners
- AV Splitters
- Cable Strippers
- Cable clampers
- Various other joiners and accessories e.g. RCA/SCART cables and converters

Misc

- 2.4GHz AV Sender
- Irdeto 2.06B CAMs, Viaccess CAMs
- Satlook Digital Signal Meter
- Satlook Analogue Signal Meter
- Satlook Digital + Analogue combo
- Satellite finders
- Angle level measure instrument
- High Quality Compasses

EXCLUSIVE

PSI
Satellite Dishes



SatFACTS MONTHLY

ISSN 1174-0779

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This publication is dedicated to the premise that as we enter the 21st century, ancient 20th century notions concerning borders and boundaries no longer define a person's horizon. In the air, all around you, are microwave signals carrying messages of entertainment, information and education. These messages are available to anyone willing to install appropriate receiving equipment and, where applicable, pay a monthly or annual fee to receive the content of these messages in the privacy of their own home. Welcome to the 21st century - a world without borders, a world without boundaries.

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our ELEVENTH year!

COOP'S COMMENT

This issue marks the end of 11 complete years of SatFACTS, a fact made more intriguing because I am still here to do it. For now. SatFACTS launched just before PAS-2 (which is scheduled for replacement late in 2006, should you care), at a time when most satellite reception involved sizeable dishes trained on wandering (inclined orbit) and aged Intelsat birds. There was not much to watch in those days (CMT or Country Music Television, on PAS-2, FTA for a year or so, was actually the lesser of evils and the best choice - which tells you what the rest were like!). There was no Sky NZ digital, no Foxtel, no Austar, while CNN, ESPN and even a movie service were FTA on C-band; for a while.

In this issue we review a rushed-by-air-from-the-USA device calling itself 'Slingbox'. Our source in California had to stand in line to be rewarded with a 'rain check' ticket ("*It will be supplied in order of your ticket number when the next shipment arrives*") because the 30,000 square foot (that's an area 100 feet by 300 feet / 30m x 90m) 'consumer electronics store' where it was for sale had sold-out their initial allotment of 250 units within hours of going on sale. Those crazy Americans - they will buy anything they perceive to be 'the latest' and 'the most amazing'. Another report in this issue talks about 'the third screen' which, like the 'third man', is a suggestion that no longer will consumers settle for having just a TV and PC at home - they want the ability and function of both in their pocket, purse or hand. "**It rings, it plays and it has TV**" (for which I paid outrageous republication rights to the Christian Science Monitor) describes the rapid growth of cellphone technology into a tiny electronics marvel that allows anyone to have everything that is at-home available no matter where they might be.

'Slingbox' and 'cellvision' have a future together. Which, of course, is why we 'married' them into a single issue (pages 6 and 15). Perhaps you can see it already. If your cellphone can be a 'cellvision' and your 'Slingbox' can allow anything you have at home on TV (DVR, VHS, security camera, etc.) to be 'transferred' to your cellphone - well, instant gratification, instant 'cellvision'. Anyplace.

Ten years ago, back when PAS-2 was a learning to fly, folks like me wrote about the 'future' of telecommunications and some - even I - admittedly - suggested that when digital technology finally took root, just this sort of 'hybrid marriage' would take place. Well, wake up and smell the roses - fondle your cellphone, pat your TV set on its plastic top, stroke your PC screen with a clean anti-static dust rag. Ten years down the track, just as PAS-2 is heading to that great satellite retirement junk yard someplace between geostationary orbit and the sun, it has finally come to pass. "*I looked into the future - and it is now.*"

My once-friend Ted Turner, over a beer during a cable TV event in the sticks of Oklahoma, once murmured to me, "*You can always tell a pioneer - he's the guy with arrows sticking out of his ass.*" I could have cleaned that up and substituted "rear end" for "ass" but those who know Turner would have also known I did this. I patted him on the back, the way you do a friend who has consumed too much alcohol, and complimented him for his great wisdom.

My still-friend Sir Arthur C. Clarke once admonished me, "Be careful - they are watching you, very closely." The "they" he was referencing turned out to be a group of folks working for the US Government, and Sir Arthur had gotten the 'tip' from a visiting US Senator to his home in Sri Lanka. Those were the days when I was one of (*hell* - I was THE!) most vocal promoter(s) of C-band home-dish TVRO in the world. My CSD (Coop's Satellite Digest) had readers (mostly lawyers looking for ways to trip me and C-band TVRO up) at every level of US government during the 1980 - 1986 period. They "knew" C-band TVRO was somehow breaking rules, regulations and hopefully (they hoped) "the law". When in desperation they could find no legal way to cancel us, a plot ensued to put C-band home dishes 'out of business.' I mention all of this because on page 31 this month we introduce the 'TVRO History DVD' that tells the complete story as it happened, month by month. "*Arrows in my ass?*" You bet your LNB!

In Volume 11 ♦ Number 132

Slingbox: Any TV, anywhere? -p. 6
Out of Market Digital Reception -p. 14
It rings, it plays, it has TV -p. 15
UonTV: Is anyone in Australia listening? -p. 20

Departments

Programmer/Programming -p.2; Hardware/Equipment Update -p. 4; Digital Tid-bits -p. 21; SatFACTS Digital Watch -p. 23; Supplemental Data -p. 26; With The Observers -p. 27

-On the cover-

US\$250, promising to send your in-home TV reception to anyplace on earth where you have a broadband/ADSL internet connection. Hell of a bargain, right? Slingbox went on sale first day June 30 in states; we began our tests on July 15th here in New Zealand and now you will know all about it; p. 6.



August 15, 2005



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PROGRAMMER PROGRAMMING PROMOTION

UPDATE

AUGUST 15, 2005

Rain fades?

"Those 'silly Americans' with their rain-fade spray-on protection (SF#131, p. 18, photo) may not be so 'silly' after all. I 'treated' my 65cm dish and the LNB cover with a car auto polish a few years ago after watching an infomercial that explained how car surfaces protected with this material do 'rain disbursement'. What it does is protect the dish surface and the LNB cover from rain drop 'beading'. Water collecting on a surface causes distortion of the surface (for the microwave signals) and of course contributes to signal loss because microwaves do not pass through the beaded water droplets without loss. And this helps maintain the performance of the dish in a heavy downpour. No, actual 'rain fade' (loss of signal because the microwave downlink has to pass through heavy rain) is not improved but what I might call 'surface-water-fade' is significantly improved by this treatment. All the yanks have done is to 'put it in a can' and 'give it a name!'"

AI, NSW

Another example of what Americans do best; package 'common sense' into an advertising campaign and collect customer's money. There is no reason why installers don't offer customers 'rain-fade' protection for an extra \$25; ten minutes time and 50 cents in water disbursing polish. Warning: Not ALL car polishes are in fact "water disbursing" - check the container before applying!

Lack of NZ TVRO outlet?

"Been pondering your comment in SF that there is no stocking distributor for a complete line of TVRO hardware in NZ. Actually, there are a couple who typically seem to hide their operations behind a closed door and certainly do not handle a full range of Ku (much less C) products. I'd like to remain 'behind a door' myself for the moment; perhaps others with some resources and a dedication to this could contact SF?"

(CC, behind a door in NZ)

Go ahead - contact Coop as
skyking@clear.net.nz.

Access to Sydney blacked out terrestrial sport? Tips on solving this problem, with unexpectedly high signal levels originating Wollongong digital, explained - starting page 14.

Videophone content is 'buzzword' in Korea/Japan. With 130,000 subscribers in first 90 days, and aiming for 600,000 by year's end, Korean 'Cellvision' is latest rapid - rampup new technology (see SF#130, p. 18). To date, most popular programming is standard terrestrial fare (such as TVOne in NZ, 9 Net would be in South Pacific) although new programming styles ('mobicasting') are appearing weekly including made-for-Cellvision soap opera-like sagas which urge viewers to tune in daily for latest episode. Initially, only 5 video-Cellphone products are currently in the market but another ten competitive brands will begin appearing on Korean shop shelves by October 1. See p. 15, here.

Web sites clearly not friendly to NZ's TVNZ are complaining the state owned firm is squandering up to NZ\$7 million a year for transponder space which so far is not producing meaningful marketing inroads into the world of FTA viewing. If by some unlikely good luck there are 10,000 homes out there watching TVNZ's B1 service, that suggests the broadcaster is paying NZ\$700 to reach each home in (annual) transponder rental costs. Hardly seems appropriate.

Major movie studios finally coming to 'digital party'. Scheduled for 2006-2007 installation, theatres throughout world will begin to receive current release flicks via satellite and fibre. Individual theatres will bear the cost of their display conversion, studios will reap benefits: 'analogue' hard print films typically cost US\$1,200 per print to create and distribute; digital '2K' and '4K' standard versions will cost studios around \$300 each including transmission costs. Advantage to theatres is sharper pictures, end to gradual degradation of hard copy film prints.

Politics: As usual. NZ First Leader Right Honourable Winston Peters is condemning current Labour Government for "silence" on subject of alleged terrorist groups operating in NZ. Media connection? Auckland based Mirchee Television, broadcasting terrestrial Ku to Indian and other subscribers from Sky Tower, has announced plans to import Al Jazeera TV network. A-J is widely believed to be a communications arm of the al-Qaeda terrorist regime, was recently admitted to ABU (Arab Broadcasting Union) with full diplomatic rights.

Satellite radio to your headset. US based service XM Radio has introduced a combination package of XM2go portable/wearable satellite radio receiver plus matching XM2go 'Live Antenna' Headphones. The headphone cords cleverly create L-band antenna for the service allowing users to wander about with earphones in place enjoying the commercial free radio services 100-plus downlinked channels; satellite to headphones (yes - reviews say it actually works)!

healing

A cure is near...

Healing is coming

<http://www.healingdigital.com>

Atlanta in April 2006?

"Put me down as interested in attending Expo 2006 at Atlanta next April. And I hope there are a few dozen Pacific region folks who go - it would be a bit like an away sporting match with us as the visiting team! Now as to the army of abandoned C-band dishes - I for one would be interested in participating, perhaps with a few others, in doing a wholesale 'salvage' operation to dismantle, catalogue and shove into a 20' container as many of these derelicts as might fit the transport. Are others interested in this?"

Clarke (advancedaerials@xtra.co.nz)

SF could certainly arrange a 'region' where the dish dismantling project could concentrate - in advance!

"There is the safety issue. I'd very much positive about going but if the world's political situation does not improve remarkably - which I doubt - I'm not certain the stress of it would be rewarding."

Reggie, NSW



More people die in their own bed than from all of the combined bomb explosions in the world each year!

"How extensive was the attendance from outside the USA (and Canada) at 2005? Would a group of us 'stand out'?"

Philip, WA

Only when we sat down to eat and complained because they don't include 'meat pies' and Fosters on their menus!

Turn about is fair play?

"Rather than sending a bus load to Atlanta to attend 'their show' in April, how about they send an aeroplane load out to Tasmania in March to attend 'our show'? Surely Brian Watson running Tazzie show could arrange this and Yank speakers?"

Shane T, Melbourne

At least that way we would not miss our meat pies and Fosters! Of course we'd need Yank-to-Australian interpreter. Ian?

HARDWARE EQUIPMENT PARTS

UPDATE

AUGUST 15, 2005

Optus D1/D2 delayed. Ariane launch vehicle now formally admits neither Australian satellite will fly "*this year*" but there is no date in 2006 when one or both might. Yes, that increases stress levels for present B1 users (Sky NZ included). Could PAS-2 Ku reconfiguration scheduled for this October (below) have some bearing on this?

PAS-2 replacement now scheduled (169E) for "late 2006" and will have enlarged Ku capacity for regions south of the equator (present PAS-2 and PAS-8 Ku concentrate Ku transponders into Asia). In preparation for late-2006, PAS-2 Ku transponders now serving Asia will be reboresighted to produce New Zealand >mid-Pacific coverage pattern this coming October - November.

Sky TV NZ, as a part of their 'Compression Headend Upgrade Project', is testing FTA receivers from a variety of (Kiwi) importer/suppliers. Receivers supplied are 'on loan' to Sky (Dean Silk is testing, Alisha Zanetich [alisha.zanetich@communio.co.nz] is co-ordinating); tests last until late August.

'Wave a phone' is latest trial technology. Concept: Cellphone has built in 'bluetooth-like' short range (0-10m) two-way transmission path. McDonalds, USA based 7-Eleven stores (5,300 outlets) are installing it now. To pay via credit or debit card, you simply 'wave' your mobile cellphone at a designated antenna and it 'grabs' your credit card information, makes the charge, and releases your purchase. Motorola is carrying this step further - an advertising poster, billboard would include 'wave-a-phone' technology. User 'weaves' phone at display, the display downloads web site address and instantly your cellphone is in direct contact with the advertiser on the display.

UK digital terrestrial conversion test, Wales. In March, communities of Ferryside and Llansteffan had their analogue TV switched off. But (350) residents received gratis STB, new aerial professionally installed, and personal visits from UK technical personnel. Purpose of test - to determine how area residents could/would 'cope' with totally new technology. Good news - 99.2% have voted to stay with digital (not that they have a choice - the analogue transmitters are now dismantled!). 23% required new 'digital antenna' and additional 22% required professional work on their antenna - 45% total that would have had switchover problems had the government not been so quick to do it for them. Alas, this was a one-off test - the next 20,000,000 or so switch-over locations will require the consumers to fend for themselves.

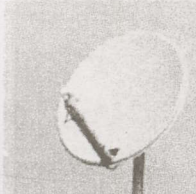
Invacom QPH-031 Ku LNB is something different; left or right hand circular, vertical or horizontal linear with four switched outputs. This LNB received "Best of Show" technical innovation award at Memphis Expo '05 show, is presently available from DMS International (www.dmsiusa.com).

Phoenix Technology Group

Satellite Equipment & Accessories One Stop Supermarket



Phoenix 2.35m Motorized Extra Heavy Duty Mesh **\$180/each**
Buy 10 get one free



Foldable Arm Dish
best one for caravan & mobile people
64cm \$25/each
78cm \$48/each
88cm \$55/each
North bracket \$5/each

Irdeto 2.06B CAM	\$110	PBI C+Ku band LNBF	\$65
Viaccess CAM	\$110	Zinwell C band LNBF	\$30
65cm Azure shine offset dish	\$25	Zinwell Ku band LNBF	\$25
75cm Azure shine offset dish	\$30	MTI C band LNBF	\$25
85cm Azure shine offset dish	\$35	MTI one cable solution LNBF	\$45
One leg gutter mount	\$18	Satellite finder	\$25
Two leg gutter mount	\$22	RG6 stripper	\$20
Tin roof mount	\$22	RG6/RG11 crimper	\$30
Wall mount	\$15	Angle meter	\$35
Superjack H-H motor	\$95	Compass	\$5
2.3m SD mesh dish	\$150	RG 6 Crimp Connector (100)	\$25
3m SD mesh dish	\$295	22K switch	\$10
3m HD mesh dish	\$330	Two way DiSEqC switch	\$10
3" 2.5m galvanised pole	\$30	Four way DiSEqC switch	\$12
3" 3m galvanised pole	\$35	Satellite 2 way splitter	\$1.50
3" 3.5m galvanised pole	\$40	Satellite 3 way splitter	\$2
3" Triangle Pole for C band dish	\$50	Satellite 4 way splitter	\$2.5
Speaker Stand for caravan use Ku dish	\$45	4 way multi-switch	\$35

Best performance



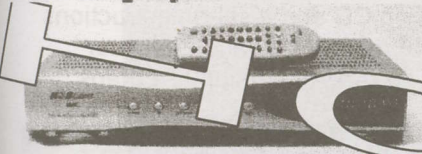
Paralipses 1.2m prime focus panel dish

\$730

(\$146/each x 5)

AZ/EL mount \$32/each

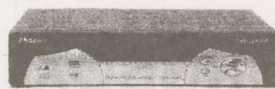
Made U.S.A



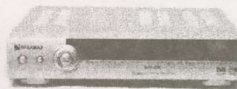
SATLOOK Digital NIT \$1395

- Satellite-receiver 920-2150 MHz.
- Spectrum-analyzer with expanded spectrum.
- Digital BER, QPSK and S/N-ratio.
- 4.5" B/W monitor for PAL/NTSC/SECAM.
- Tunable sound 5.5 - 8.5 kHz.
- LNBF voltage 13/18V, 22 kHz tone switch.
- DiSEqC control (1.0, 1.1, 1.2).
- KU- and C-band (normally inverted video).
- 99 memory-positions for spectrum pictures.
- Satellite identification.
- Symbol rate 1-30 Msymb/s.
- RS 232 for PC connection.
- Built in, rechargeable battery.
- Only 5 kg complete with carrying-case.
- Transponder content analysis.

Koscom 1600A Irdeto Embedded Satellite Receiver \$200 with free Optus Aurora card
Buy 10 or more and get 5% discount & one box of 305m RG6 cable for free



Phoenix 2800A \$130
The Best FTA Satellite Receiver On the Market



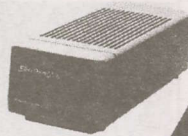
Dreamax DT470 \$160/each
Irdeto Embedded Satellite Receiver



Zinwell 15K LNBF \$25/each
for box of 24



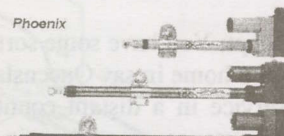
Motek SG2100 Motor \$105/each



SuperJack EZ2000 Positioner \$50/each



Motek V Box II DiSEqC1.2 Positioner \$65/each

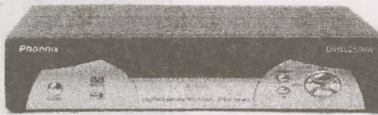


Actuator from 12' standard duty to 36' heavy duty
From \$35/each to \$220/each

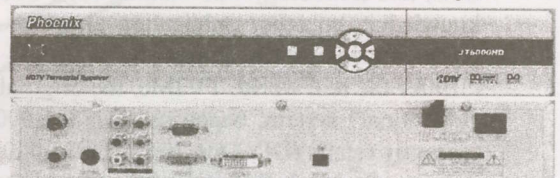


RG6 Cable
Dual shield \$65/box
Quad shield \$75/box

Phoenix JT3300A Digital Terrestrial Receiver \$110/each



Phoenix JT6000A High Definition Digital Terrestrial Receiver with DVI output



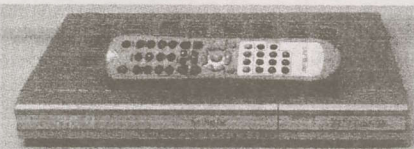
This Month Trade Special

Optus B3/Pas 8 Free To Air channel Package

Phoenix 2800A digital satellite receiver x 5
64cm foldable arm dish x 5
Zinwell 11.3GHz/10.7GHz/universal Ku band LNBF x 5
Gutter mount/wall mount x 5
One box of RG6 cable

\$975 (\$195/each x 5)

Magix 9600 Digital satellite receiver with embedded cam + 2CI \$160/each



Optus B3/Pas 8/Optus C1 Irdeto embedded channel Package

Koscom 1600A Irdeto cam embedded digital satellite receiver x 5
64cm foldable arm dish x 5
Zinwell 11.3GHz/10.7GHz/universal Ku band LNBF x 5
Gutter mount/wall mount x 5
One box of RG6 cable

\$1275 (\$255/each x 5)

C band free to air channel Package

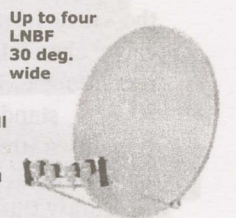
Phoenix 2800A digital satellite receiver x 5
2.3m SD mesh dish x 5
Zinwell C band LNBF x 5
3" 3m galvanized pole x 5
One box of RG6 cable

\$1975 (\$395/each x 5)

Multi-beam 1m offset dish

Ku band satellite from Optus B3 + Optus C1 + Pas 8 + Pas 2
Just one dish to receive all

\$150/each



Paralipses 2.6m mesh dish

\$1500

(\$300/each x 5)

Easy transport

Last stock mesh dish from USA

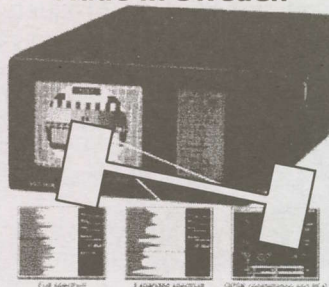


Made in Sweden

SATLOOK COMBO \$2295

The combination of SATLOOK Digital NIT and TVLOOK

- Input frequency: 2-900 MHz and 920-2150 MHz
- 4.5" B/W Monitor for PAL/NTSC/SECAM
- Lots of memory positions for spectrum pictures
- RS232 for PC-connection
- Built in, rechargeable battery. Only 7kg complete with carrying case
- TV-PART:
 - 2-900 MHz spectrum analyzer
 - Presents full range spectrum (and expanded)
 - Very high accuracy, ±1dB (at 20°C)
- SAT-part:
 - 920-2150MHz spectrum analyzer. Digital BER, QPSK and S/N-ratio
 - Satellite-ID and TV/Radio-channel info (NIT)
 - Tunable audio bandwidth 5.5-8.5MHz
 - LNBF voltage 13/18V, 22kHz tone switch
 - DiSEqC according to level 1.0, 1.1, 1.2
 - KU- and C-band (normally inverted video)



Dealer Inquires Welcome

Come To Us For Your Best Deals

21/148 Chesterville Rd. Moorabbin VIC 3189
Website: www.phoenixsatellite.com.au

Phone: (03) 9553 3399 Fax: (03) 9553 3393
E-mail: sales@phoenixsatellite.com.au

This won't take any money out of your pocket

SLINGBOX is more like 'sling-crap'

The concept: You have some sort of TV service (pay, other) available at a home in say Queensland. Or, you have a similar level of service in a distant country; say Yugoslavia. Now, with the assistance of a 'magic box' you are able to use Internet as a transmission medium to send the TV from Queensland (or Yugoslavia) to a distant point - *any distant point*. On demand.

SatFACTS first investigated this new level of technology in our issue # 112, December 2003. At that particular point in time, this technology was 'leading edge' and to the best of our knowledge, no other publication anyplace in the world had revealed its existence. Bravo us.

Enter the real world. TV2Me, the original and still the only "functional" system, began as a US\$16,000 region package, currently retails (DIY) for below US\$5,000 and for most that remains "pricey". But, it works - at a professional level. And now, as should be expected once so compelling a concept is introduced, others appear attempting to capitalise on the concept of TV2Me if not in fact providing the performance. The most visible example is a much hyped, widely-pulicised, super-cheap (tempting, in fact) low cost version called (the) 'Slingbox.' US\$250, available at consumer electronic stores throughout the United States such as Best Buys and Circuit City.

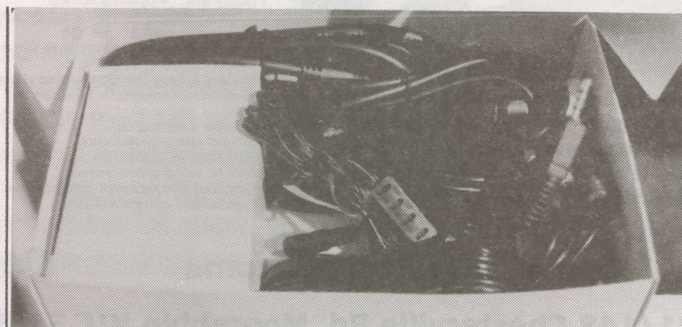
Slingbox went on sale in the United States the last day in June; tens of thousands were sold day-one. SatFACTS received a Slingbox unit in mid-July, but the market response was piling up within the first week of the product appearance in the USA. Our bottom line here: Not one of the technology reviews suggests readers should spend money on this product.

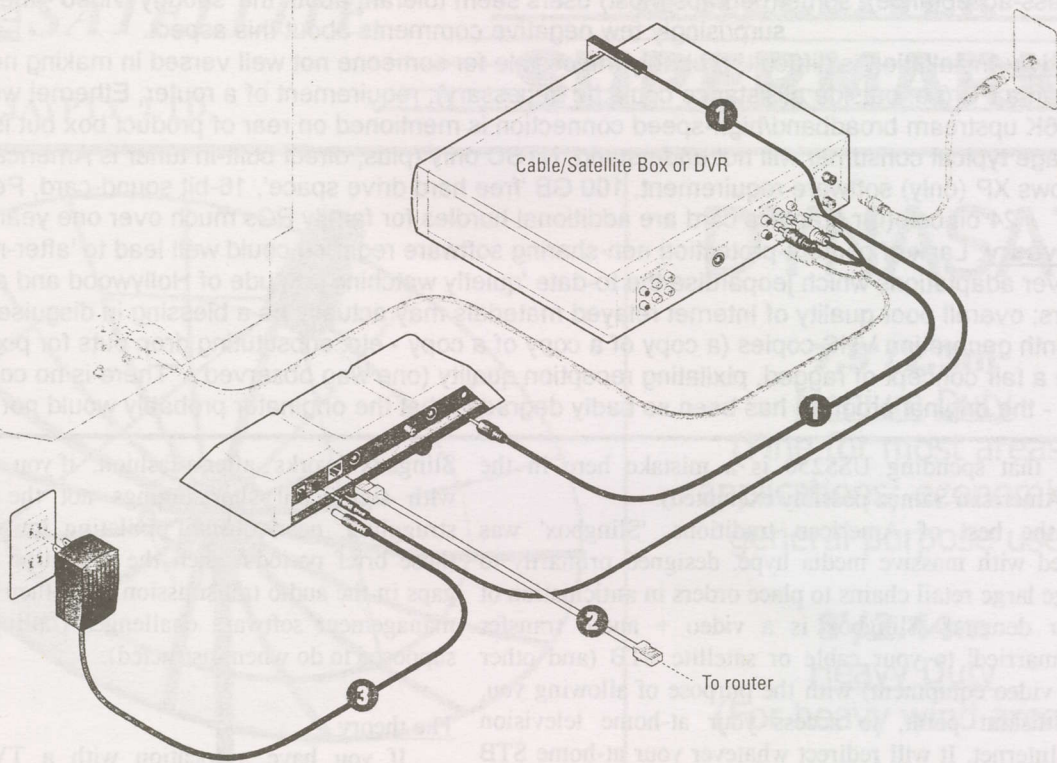
This is a challenging product to test in New Zealand (or Australia or most of the balance of the world) because virtually everything about it is 'USA' / 'NTSC'. That includes the video format (PAL is not supported), channelling (USA cable channels at 6 MHz spacings), and of course power requirements (117V AC). Video format could be corrected with a standards converter, powering is a Dick Smith step-down transformer away. Channelling, however, is a



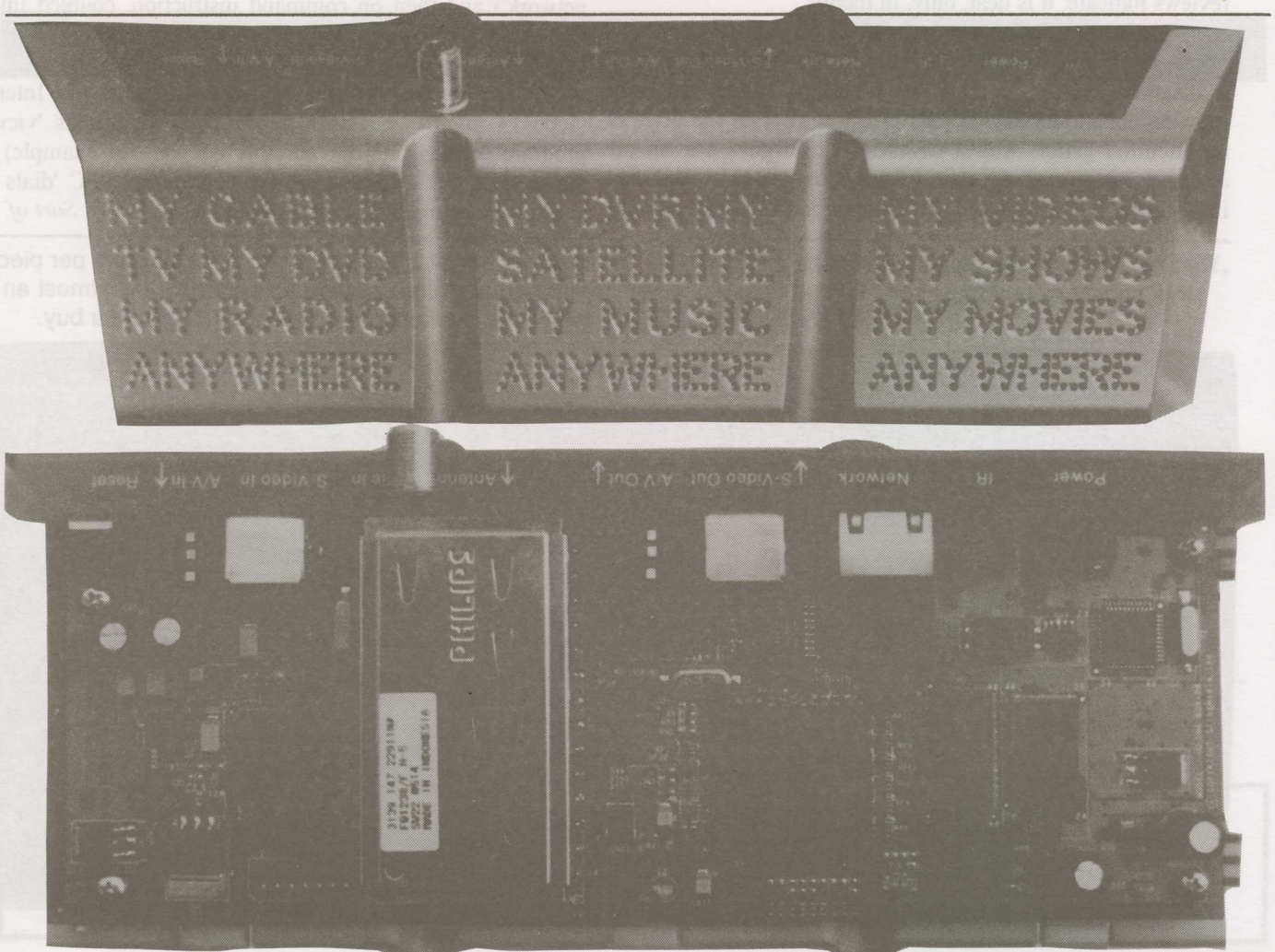
killer (short of replicating a NTSC channel environment in your home). So - there is no comfortable way for SatFACTS to actually "test" the Slingbox and we are forced to rely upon a rush of product reviews appearing within the USA to

'A candy bar wrapped in aluminium foil' as one reviewer dubbed the item. It is small (27cm x 10cm x 40cm high), arrives with a sizeable number of connection cables (below, right), plus an installation CD and a set of instructions for connection. Unfortunately for non-NTSC readers, it is mostly useless short of major renovations to your 'at-home' video system, as we explain. Conceptually brilliant - performance, not so. A PAL version? Perhaps.





How it integrates (above). What it looks like (below): The full 'aluminium foil wrapped plastic container, and, what you see when you remove four case holding screws.



The GOOD, the BAD and the UGLY

Positive: Price (US\$250); has attracted, is attracting, reams of interest which has the effect of making the concept of 'place shifting' more generally understood (a necessary step if there is to be eventual mass-acceptance); some (perhaps most) users seem tolerant about the 'shoddy' video - there have been surprisingly few negative comments about this aspect.

Negative: Installation is difficult, probably impossible for someone not well versed in making new programming work in a PC (i.e. outside assistance could be necessary); requirement of a router, Ethernet wiring harnesses, 256K upstream broadband/high-speed connection is mentioned on rear of product box but is explained in language typical consumer will not understand; NTSC only (plus, direct built-in tuner is American channel plan); Windows XP (only) software requirement, 100 GB 'free hard drive space', 16-bit sound-card, Pentium IV 1 GHz, 24 bit colo(u)r graphics card are additional hurdles for family PCs much over one year in age.

Unsavory: Lack of content-protection non-sharing software regimen could well lead to 'after-market' uses and clever adaptations which jeopardise the to-date 'quietly watching' attitude of Hollywood and other copyright holders; overall poor quality of Internet relayed materials may actually be a blessing in disguise - think of fifth or seventh generation VHS copies (a copy of a copy of a copy - etc. substituting drop outs for pixilating) and you have a fair concept of ragged, pixilating reception quality (one wag observed - "There is no copyright problem here - the original program has been so badly degraded that the originator probably would not recognise it!").

conclude that spending US\$250 is a mistake here in the Pacific (American Samoa possibly exempted).

In the best of American traditions, 'Slingbox' was introduced with massive media hype, designed primarily to encourage large retail chains to place orders in anticipation of consumer demand. Slingbox is a video + audio transfer device, 'married' to your cable or satellite STB (and other in-home video equipment) with the purpose of allowing you, from a distant point, to access your at-home television through Internet. It will redirect whatever your at-home STB is receiving, to you, using Internet as a transmission medium. In theory, it seems like a pretty neat device. In fact, as the reviews indicate, it is neat, only, in theory.

Slingbox (the name is supposed to suggest in consumer minds the ability to 'throw/toss/i.e. 'sling' your at-home TV to a distant location) is US\$249 (A\$329). When the only previous functional device sells nicely at \$4,495, the price is an attention getter. And a caveat: TV2Me guys are rip off artists, or, is something absent from Slingbox that one finds in TV2Me? The answer is, TV2Me works as advertised and

Slingbox 'works', after a fashion, if you are willing to put up with significant shortcomings not the least of which is struggling, near-constant pixilating, low quality video during those brief periods when the pixilating ceases, and jagged gaps in the audio transmission. And then there is the rash of management software challenges (failing to do what it is supposed to do when instructed).

The theory

If you have a location with a TV reception system functional, whatever that system has access to can be converted to MPEG, passed through a 'router' ('home network') and then on command instruction, coupled into a broadband (256 kbps or better) connection for transport through Internet. The router is not provided by Slingbox.

At the receive end, the Slingbox delivered via Internet video (+ audio) is simply a data stream. Sling's 'viewer' program (placed on your portable lap top, for example) is required at the reception point. The remote PC 'dials up' your router/source PC, connects and you are away. *Sort of.*

Rumour says the developers have spent US\$12,000,000 bringing this product to market. At \$100 profit per piece, that suggests they must sell 120,000 to 'break even', a feat perhaps already done. At US\$250, it is almost an 'impulse buy' and the in-store container (below) is a well done marketing tool designed to create a buy.

slingbox

Watch your
Sitcoms, pay-per-view movies, premium channels, recorded shows, hometown news, favorite teams.

From your
Bedroom, backyard, office, vacation, airport, coffee shop...
All you need is a PC and an Internet connection.

Here's what you need

- Any TV source (antenna, cable, satellite, DVD, VCR, or camera)
- A home network and router
- A broadband Internet connection* (required for remote use only)
- Laptop or desktop running Microsoft Windows XP

Box Contents

- 1 Slingbox
- 1 AC Adapter (110-220V)
- 1 Ethernet Cable
- 1 RCA Composite A/V Cable
- 1 Slingbox Cable
- 1 RF Coax Cable
- 1 Quick Start Guide
- 1 SlingPlayer™ CD ROM
- 1 Infrared Remote Control Cable

Minimum PC Client Requirements

- Windows XP Home Edition or Windows XP Professional
- 1 GHz Processor
- 1 GB RAM
- 100 MB Free Hard Drive Space
- 16-bit Sound Card
- 24-bit Color Graphics Card
- 100 MB Free Hard Drive Space
- 16-bit Sound Card
- 24-bit Color Graphics Card

Network (connect your Slingbox to your network)

- Cable Modem or DSL Modem (not required for local use)
- Router (required for remote use)
- Ethernet Cable (required for remote use)
- Broadband Internet Connection (required for remote use)

Video (HDMI and Audio Source with your Slingbox)

- Analog Cable
- Digital Cable Set Top Box
- Satellite Receiver
- Digital Video Recorder (DVR)
- DVD Player (required for remote use)
- 1600 Pixel (HD) Display (required for remote use)
- 1600 Pixel (HD) Display (required for remote use)
- 1600 Pixel (HD) Display (required for remote use)

Audio Source (with your Slingbox)

- Analog Cable
- Digital Cable Set Top Box
- Satellite Receiver
- Digital Video Recorder (DVR)
- DVD Player (required for remote use)
- 1600 Pixel (HD) Display (required for remote use)
- 1600 Pixel (HD) Display (required for remote use)
- 1600 Pixel (HD) Display (required for remote use)

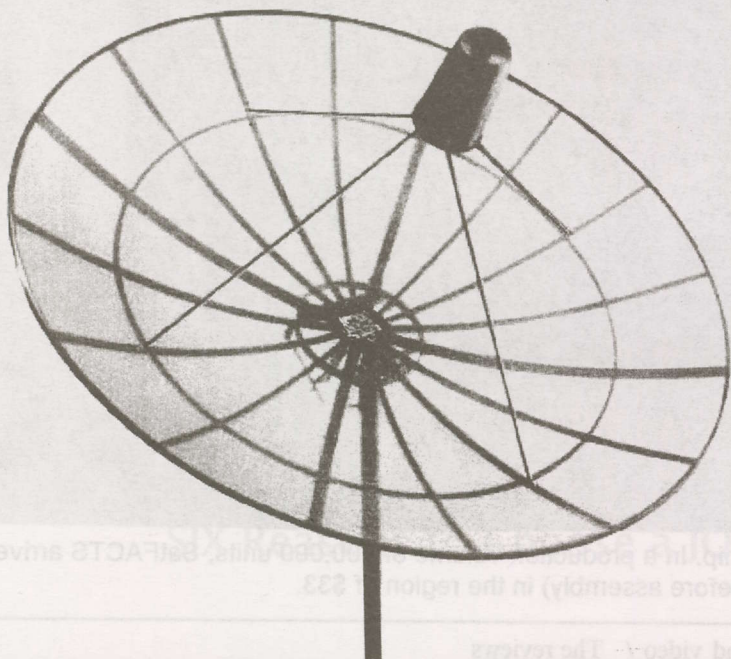
sling media www.slingmedia.com



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applications; economical,
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8'/2.44m

Heavy Duty

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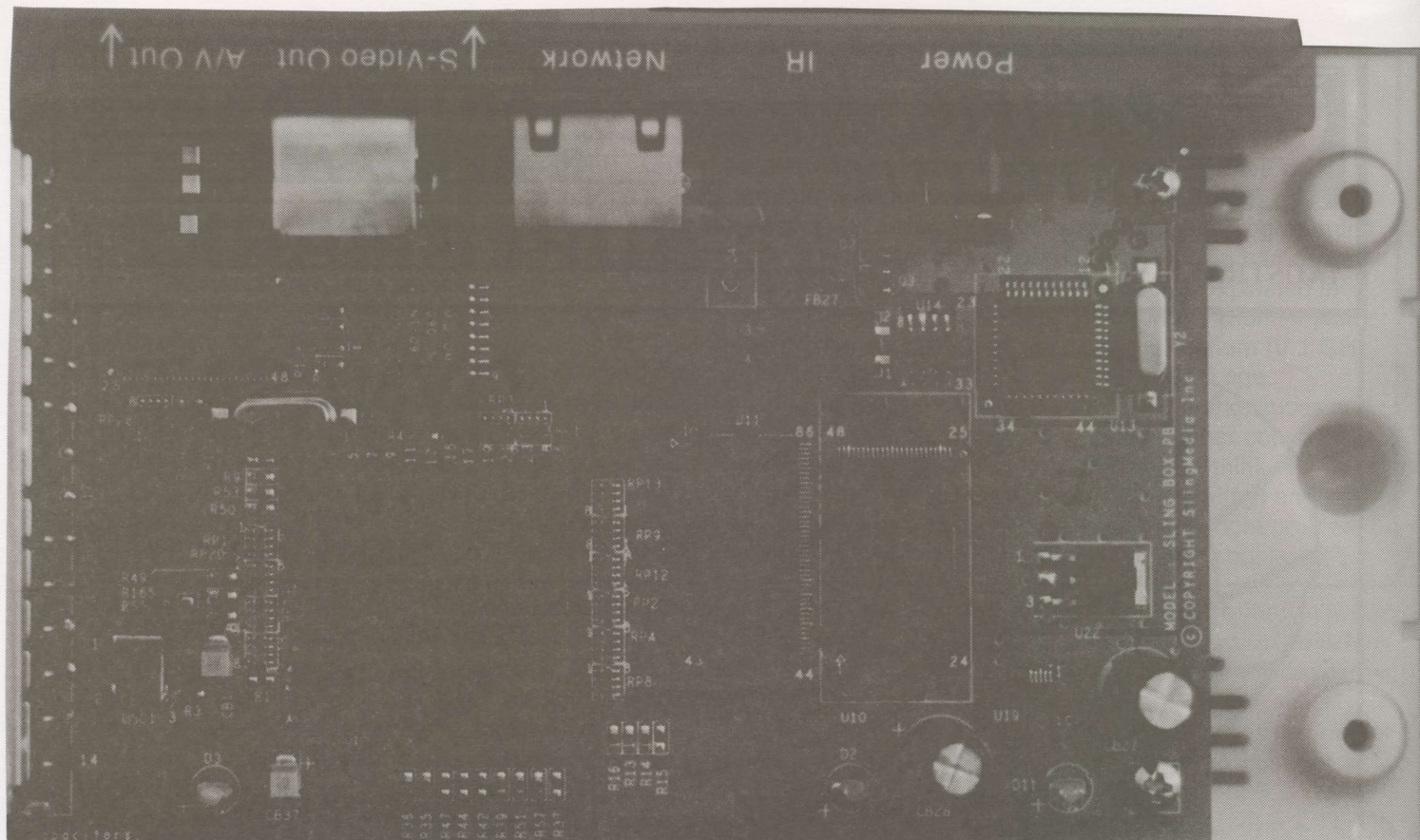
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'Heart' of the Slingbox is a media processor chip. In a production volume of 100,000 units, SatFACTS arrived at a per-unit cost (before assembly) in the region of \$33.

Now the practical. Slingbox works with baseband video / audio at the source. If your Slingbox location has a cable/satellite STB that provides video + audio output, this is one possible input source. A DVD player, hard drive recorder / DVR (with built in locally correct-channel tuner), VHS machine (also with a locally correct-channel tuner) are other options. Another option is the in-built (NTSC/USA) tuner of the Slingbox - provided your 'signal source' location will in fact be where NTSC is the standard.

At a distant reception point, your PC reception attempts to 'talk to' the home Slingbox through Internet so that you can change channels by long-distant remote control. This is accomplished by an 'Infrared (IR) control cable 'emitter'; one end plugs into Slingbox, the other end is positioned at the cable/satellite STB (or DVR) so that it 'couples' light energy originating with you at a distant point keying instruction on your remote keyboard / mouse. The Internet carries that instruction to the Slingbox which, through the IR remote cable and emitter, couples to your STB / DVR; and a channel change takes place (you hope!).

It is worth noting that TV2Me pioneered this 'IR over IP' technology, using components from a Canadian IR design firm, two years ago, and in the case of TV2Me it is universal, controlling any video source device. With a vast array of differing IR 'models' out there in the world, many using non-standard and often proprietary technology, there are severe user problems when the 'commands' available through the Slingbox do not match the IR standard of the receptor (STB / DVR) unit (think of what happens if you by mistake pick up the 'wrong' RCU and attempt to operate a TV set or VCR; they don't 'speak' the same language). This incompatibility apparently is widespread, and is mentioned in most of the early hands-on reviews.

The reviews

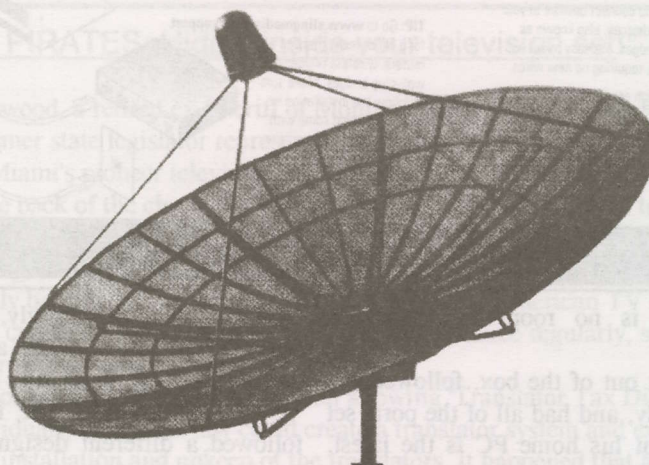
"The Slingbox hides remarkable capability in a non-intimidating package that looks like a large, foil-wrapped candy bar and does not require connecting anything to the inside or outside of your PC. Unfortunately, it subjects users to three of the least pleasant tasks in the (home) electronics realm; tinkering with a home network, rearranging the pasta bowl of wiring behind the TV set and programming an allegedly universal remote control.

"The networking chores are by far the worst of it. To begin with, the Slingbox includes only an Ethernet jack, not a wireless-working receiver. So if your house, like most, is not wired for Ethernet, you'll need to acquire some sort of network adapter such as a WiFi-to-Ethernet bridge to get the Slingbox online. And that, in turn, requires some additional network re-plumbing at two locations (punctuated by reboots of the Slingbox when it initially ignores new connections).

"Sling's Windows XP-only software, in turn, failed to report any sort of error when it ran into an obstacle, such as firewall software that prevented downloading new instructions to the Slingbox, leaving one to guess whether things were simply going slowly or had stalled out. So the configuration process dragged on for more than an hour, with little or no help from their poorly organised tech-support site (which was unreadable in the Firefox Web browser)."

SatFACTS spoke with a Slingbox user in the States who reported a contrary view. "To be fair, you have to consider the installation challenge to be a 'competitive non-issue'. I think this set-up / installation 'gripe' is a over-blown; the same complaints would go with virtually any PC that is being turned into a 'server'. Customers either have to be 'smarter' or be prepared to read and follow the (adequately written)

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2 Connect the Slingbox to Your Home Network (router)

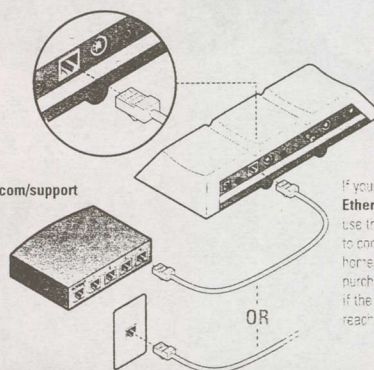
The Slingbox works with any high-speed Internet connection or broadband home network. **You must have a router to use the Slingbox.**

IMPORTANT: If your router is not within cable reach of the Slingbox, you can:

- Use wall-plug bridges, which use your existing in-home electrical outlets to connect devices to your network. These wall-plug devices, also known as HomePlug or Powerline bridges, are easy to set up and use with the Slingbox, requiring no new wires.
- Use a wireless bridge, which connects devices out of Ethernet cable reach of your router wirelessly to your network.

Go to www.slingmedia.com/support for details.

TIP: Go to www.slingmedia.com/support for a list of recommended routers, wireless bridges and wall-plug bridges. Make sure to follow the installation instructions that come with the equipment you purchase.



If your Slingbox is located near an Ethernet jack or your router, use the supplied Ethernet cable to connect the Slingbox to your home network. You may also purchase a longer Ethernet cable if the supplied cable does not reach your router.

instructions properly - there is no room for error (or prima-donnas) here!

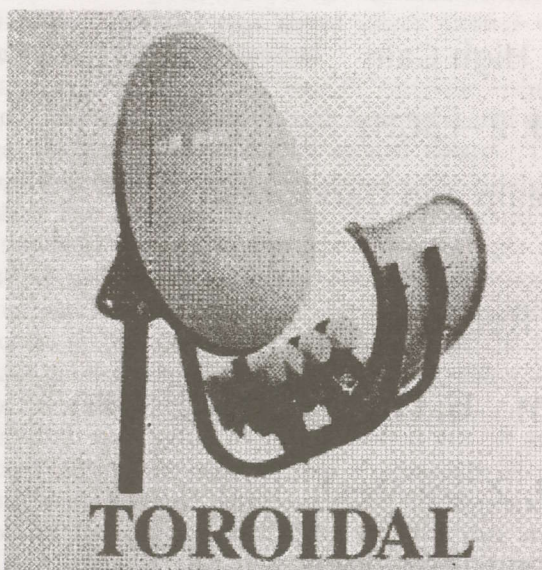
"My ten year old son took it out of the box, followed the written instructions appropriately, and had all of the ports set up with 10 minutes (I do admit his home PC is the latest, greatest, does everything and has everything version, however).

"I cannot say the same 'positive' things about the video quality - it looks kind of like how a 'fart sounds in church'; not acceptable. Even given some license to a 'miracle' concept, the performance is not acceptable. What is a show stopper is that when there is a hiccup on the net, between me and the source, the Slingbox in attempting to 'place shift', chases the net's ever gyrating bandwidth like a 16 year old girl driving her first stick shift. The audio stops completely,

then stammers disarmingly, and the picture contorts and jerks all over the screen while attempting to recover. It is not a pretty sight (site!) and lasts several seconds, minimum.

"By comparison, the far more expensive TV2Me has followed a different design criteria and by a tightly fitting combination of hardware and software made it so interruptions are few. Even under the worst of 'network conditions', TV2Me eases into a tolerable, high resolution freeze frame while the audio invariably continues unpimpinged. Losing twenty seconds of a soap opera video is not the end of the world, but of course it is annoying."

There is a parallel here which satellite installers can identify with. Slingbox responds when there is a loss of network bandwidth much like a Ku band dish system does when it rains heavily - audio sputters, video pixilates and



TOROIDAL

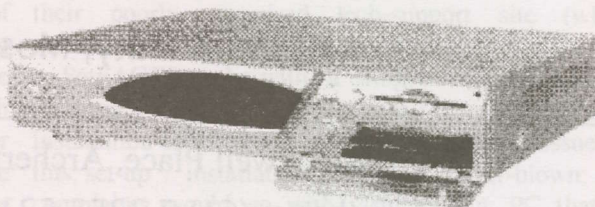
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Release dates:

15 August: "TVRO History" (the CSD + CATJ collection covering 1974 - 1987); as it happened

15 September: (DVD pre-release version): "VIDEO PIRATES" (Coop's tell-all book that leaves no dish unturned!)

1 November: (DVD pre-release version): "Television: The technology that changed our lives"

EXCERPT: "VIDEO PIRATES: Hiding inside your television set!"

A man named John Spottswood, a retired ex-Sheriff of Monroe County, Florida (in which the Ernest Hemingwayesque Key West is located) and former state legislator representing the same county district, had in the mid 50s engaged the services of AT&T to bring Miami's pioneer television station (channel 4, WTVJ) from an off-air pickup point near Key Largo to Key West, down the back of the chain of (Florida) Keys. Spottswood's Jerrold turn-key system grew to more than 10,000 subscribers but being a frugal man, the owner had kept it as a five channel low-band system well past the point when virtually all others had grown to 12 or more channels. His cable penetration was for all practical purposes 100% of all TV equipped homes primarily because the distance to Miami, the nearest American TV stations, measured 160 miles and complicating life for anyone crazy enough to try to receive over this distance regularly, stations from Habana (Cuba) on the same channels as Miami were but 90 miles distant.

During the 60s, a number of US states adopted legislation allowing 'Translator Tax Districts' to be formed - a county, for example, or a group of individuals, using this law could create a translator system and every home in the region would be automatically 'taxed' for the installation and upkeep of the translators. It happened that Monroe County, encompassing all of the Keys from Largo to Key West, decided that they would partake of this new law hoping to improve television reception for residents. Spottswood, possibly complacent in his near-retirement years and sitting on upwards of \$75,000 gross income each month from his cable subscribers, somehow missed the plan until it was scheduled to be placed on a local referendum ballot.

Segue now to the eve of the election. The 6PM news from Miami on Spottswood's five channels has just begun and there is a break in the reception. Suddenly, without prior announcement, the homes of Key West were staring at the man himself, from his local TV studio. On not one but all five channels; there was no escape. He began to speak, first from a prepared script but shortly he warmed up to the topic and deviated off into an ad-libbed story with increasing emotion.

"Tomorrow we will all go to the polls to vote on a contentious issue - mislabelled as a 'Free TV' mandate. It involves every home in this county being assessed a tax for the privilege of watching television, whether that home watches the proposed translator stations or not."

Spottswood went on to explain what a tax district is, how it worked, and ad-libbed, "It will be run by the same semi-skilled incompetents who operate the water system, the electricity service and maintain our roads". He was on a roll here as all three were frequently criticised by citizens. "Putrid water and in the future putrid TV" he went on - even in his declining years he remained a powerful political orator,

"Now, what will we do about this new tax which nobody wants or needs?" he asked. "We will, of course, vote it down" suggested the man who was appearing simultaneously on all 5 Key West cable channels.

"And, if we do not do this, what then? Well, first of all, it could be six months, a year, even two years before a translator tax district actually produced TV pictures here. And then when it arrived, each home would be forced to spend upwards of \$200 to receive these channels with a new antenna and other equipment. Even your television set will have to be replaced - check now. Does your TV set have a tuning dial for the translator channels numbered 70 through 83? No, of course it does not but this will be mandatory to receive these puny, low powered ultra high channels!"

The crescendo was building.

"So I will tell you what I am urging. That we all go to the polls and there we all vote against the unfair tax on TV viewing. And if by some chance not enough of you vote against this tax, here is what will happen."

Spottswood reached for a small box with five switches carefully displayed.

"Your cable TV will disappear. First channel 2", as he reached and turned off cable 2 - its own image dissolving into a blank on-screen raster. "And next, channel 3" as the switch was pushed to eliminate that channel. "Then channel 5" as he repeated the action, "and, channel 6". By this point those who followed his tirade back to the single remaining channel (4 or the normal WTVJ channel which most homes watched for their 6PM news) heard him continue.

"There will be no cable TV on any channel. And for six months and perhaps 24 months, there will be no TV reception here in Key West and the southern Keys while the bureaucrats struggle with creating the translator tax district and attempt to build their translator system."

A wicked smile crossed his face as his finger moved to the last remaining operating channel on the system; 4. The screen went blank and for added impact, all channels remained off the system for an additional 30 minutes.

For Spottswood it was a desperate move in the last minutes of the final quarter of his life. And while Key West voters were undoubtedly strongly influenced to vote against the measure, those further north in the Keys along the highway to Miami - not served by his cable system - carried the day and eventually there was a translator tax district empowered. Spottswood 'retaliated' by selling his cable system to another operator for more than \$5,000,000.

unpleasant noises burst through the speaker system as the rain losses ebb and flow. TV2Me does a gentle halt to reception when the web bandwidth compresses, the screen stays frozen on a frame until the network straightens itself out (i.e., the rain fall diminishes) and then restarts as if nothing torrid had occurred. It comes down to the difference between a screen that 'spits at you' and one that locks up tight until the disturbance has gone away.

Our technology reviewer continues:

"As part of the installation process, the box's 'IR emitter,' a small plastic pod at the end of a wire, must be positioned to face the infrared remote-control receiving device located on the front of your video source (satellite or cable STB, DVR, TV set if using 'off-air' signals from a rooftop antenna). The Slingbox software 'should' generate the right control codes for a given model, but this requires extra tweaking in the real world.

"The last step was to open a port in a WiFi router's firewall, necessary to allow for remote distant-point viewing. Slingbox claims this happens automatically with the installation disk they provide (pops into your PC) but in fact this only appears to support the latest crop of routers; those one two years old had to be opened 'manually'.

"From home or abroad, logging into your Slingbox from afar requires entering the box's name, a 36 character Finder ID, and a password. Only one user can log into a Slingbox at a time - anyone left at home where the 'sender' is located will have to concede channel selection control to the distant viewer".

The 'legal'

The copyright premise is that any 'place-shifter' is merely an 'extension cable' allowing you to watch your at-home TV 'in another room'. The Slingbox's software only allows one user at a time, in theory Slingbox is a private link. There are descriptive warnings in the installation CD advising you that you must not use someone else's Finder ID and password to access their (rather than your own) Slingbox. They also advise you that as a part of your 'purchase license agreement', you will not place Slingbox in a third party home (such as Aunt Sophia in Belgrade). However, the software does not enforce either of these 'rules'.

The easiest rule violation is *sharing* your Finder ID and password. Already, clandestine web sites have appeared

where folks are 'sharing' their Slingbox with others on a share and share alike swap basis. As more and more people discover how to make their system work, 'sharing' is likely to become a growing activity. And of course the obvious - if you know the appropriate ID/password combination, from someone's Slingbox, and you have a PC - well, happy viewing (in so much as this is possible)!

Oh yes - there is another legal point stuck in this argument. The US law on this subject, known as "The Millennium Copyright Act", seems to refer only to *digital* sourced feeds. On the other hand, a cable TV STB, MMDS STB, satellite STB produces *analogue* outputs - not digital (as well they might at this point in time; there being very few digital input monitors or receivers available). Both TV2Me, and yes Slingbox, accept an analogue input - *not* a digital input. Think of the input to either system as you would the audio coming out of an FM radio receiver versus a mirror image copy of a digital transfer (no analogue in the middle). So if the copyright folks are leaning on "The Digital Millennium Copyright Act" for protection to their materials, well - perhaps they had better go back and read the act for what it *really* says. Digital in to digital out? The Act says "no-no". But analogue in and digital out? The Act is 'silent' on this scenario.

And finally

While the original, albeit more expensive commercial grade TV2Me (www.TV2me.com) remains the signal goal post in performance and consistency that (sling-come-lately) devices such as Slingbox (www.slingmedia.com) target, the folks at TV2Me are hardly standing still resting on their superior performance. The latest version uses a CODECS modification that allows users to create full S-VHS level reception with Internet speeds as low as 128 kb/s (previously 384). The fact that all TV2Me systems in operation (they are now world-wide, and handle NTSC plus PAL with no problem) will be upgraded with the latest software improvements makes this another reason why spending more money is a suitable business decision. Slingbox is unable to update in the same way.

Just for the record: SatFACTS Publisher Bob Cooper has a continuing interest in TV2Me and while we attempt to remain 'technically neutral' concerning these developments, there is always the chance that our 'bias' may be showing!

Reaching out for forbidden stations

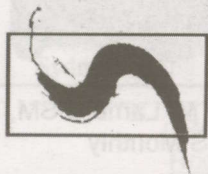
Out of Market Digital Channel Reception

The method I use (from Sydney) to gain reception from additional DTT stations through the STB makes good use of the DVB-T tolerance to multipath. In Sydney, many people have installed large UHF aerials to pick up Wollongong or Newcastle (out of market) analogue signals, usually to receive Cricket matches when they are blacked out in Sydney. Being beyond line of sight, and often significantly

shielded by local and intervening terrain, analogue signal levels vary up and down by 10 dB or more, in the channel 53 to 65 region.

However, the trio of Wollongong commercial DVB-T stations operate on channels 36, 37 and 38. Additionally, Sydney SBS is on channel 34 (uniquely, a SFN / single frequency network) and a datacasting service is on channel 35. In my location (this will vary as location changes, of course), I found that by combining the Sydney VHF and using a Wollongong facing UHF all channels from both

Report by Roger Woodward as
Roger.Woodward@bigpond.com



SRT 4640 (ex-X-Box!)

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 Input Frequency Level : -65 dBm ~ -25 dBm
 Noise Figure : 12 dB Max.
 Input Impedance : 75 ohm
 I.F. Bandwidth : 36 MHz
 Input Return Loss : -8 dBm
 Tuning Step Size : 125 KHz
 Demodulation : Shaped QPSK
 Symbol Rate : 2-45 Mbauds
 FEC Rates : 1/2, 2/3, 3/4, 5/6, 7/8, AUTO

LNB SECTION

Connector : F-Type - Loop-through
 Power : 400 mA Max.
 Polarization : Horizontal : DC 16-19 V
 Vertical : DC 11-14 V
 Band (Hi/Low) Selection : 22 KHz On/Off
 DiSEqC 1.2 USALS : 64 Universal LNB Control

SYSTEM RESOURCES

Processor : 32 bit (80 MHz)
 SDRAM : 8 Mbyte
 FLASH : 2 Mbyte
 EEPROM : 32 Kbyte

VIDEO SECTION

Decoding : MPEG-2 & MPEG-1 Compatible
 Compression Technique : Main Profile, Main level
 Format : PAL (NTSC)
 Frame Rate : 25 (30) Hz
 Aspect Ratio : 4:3, 16:9
 Active Pixel : 720 x 576, 720 x 480
 Output Impedance : 75 ohm
 Composite Output Level : 1Vp-p±0.07Vp-p (75 ohm load)
 S/N Unweighted : 57 dB Min.
 Frequency Response : 3 dB Max. (0.5-5.0 MHz)
 Data Rate : Up to 15 Mb/s

AUDIO SECTION

Compression Technique : MPEG-1, 2 Layer 1 & 2
 Sound Mode : Dual (Main/Sub), Stereo
 Frequency Response : 20 dB - 20 Hz to 20 KHz
 Output Impedance : 600 ohm unbalanced
 Total Harmonic Distortion : 1% Max. - 40 Hz ~ 20 KHz

CONNECTORS SECTION

A/V Out : RCA x 3
 RF Out : IEC Male
 Aerial In : IEC Female
 Service Port : RS-232C (115 Kbps Max.)

MODULATOR SECTION

Output: PAL G/I/K

POWER SUPPLY

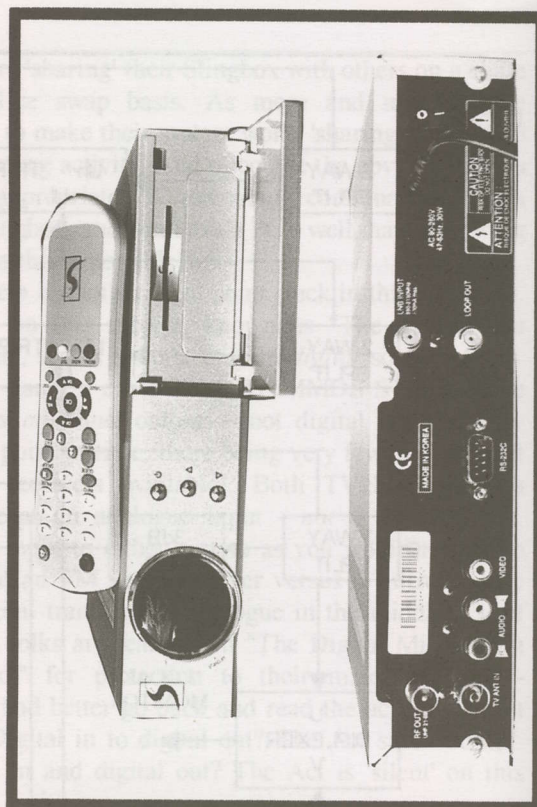
AC 80-264 V, 47-63 Hz, 40W Max.

DIMENSIONS

260 (W) x 240 (D) x 58 (H) mm

21-69 UHF

Power Consumption : 30W Max.



SRT 4640

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Plenty of questions remain, of course. Some are technological, such as the need to beef up battery life to power heavier usage and to employ bandwidth more efficiently so that the system doesn't jam. Others are financial: How much will subscribers pay to watch something on a tiny screen (1)? If phones eventually can share video with other users, can the content be designed to prevent unauthorised sharing?

With these and other important questions essentially unanswered, the promise of new viewing audiences is luring everyone from manufacturers to content providers.

"We are at the very early stages of (producing) what could be pretty interesting video for cellphones", says Larry Shapiro, an executive vice president at the Walt Disney Internet Group, the online arm of Walt Disney Co.

So-called third-generation (3G) mobile phones, which transmit data at much faster speeds than today's 2G digital phones, will open the prospects for better content, Mr. Shapiro says. Already, 3G games on phones "are equivalent to Game Boy Advance quality in terms of graphics and richness."

For advertisers, phones represent new opportunities to reach consumers. For mobile-phone companies, video and other data offer new revenue streams as increased competition for cellphone customers squeezes today's profit margins.

Third-generation phones are already in use in Japan, South Korea and Europe. In Germany, mobile-phone giant Vodafone announced during July that it had sold 411,000 3G phones there since they were introduced late last year. Though that represents just 1.5 percent of the company's German customer base, they already bring in 4 percent of the total sales revenue. The company hopes to have 10 million 3G customers in Germany by March 2006.

In the United States, mobile-phone companies are in the midst of field trials with the expectation of broad deployment in the next 12 to 24 months.

Better video will be one of the chief advantages of 3G. Worldwide, about 25% of all digital TVs sold in 2010 will be in the form of mobile phones, predicts a report just issued by Strategy Analytics, a consulting firm in Boston.

Meanwhile, "for younger consumers, cellphones are already the third screen," notes Avi Greengart, principal analyst for mobile devices at Current Analysis, another consulting firm. "They're being used for everything from text messaging to downloading ring tones and playing games".

"Their phones go with them everywhere," Mr. Greengart says. "They have grown up with these devices. They expect them to do just about anything. And they are willing to pay for additional services - certainly to a much higher degree than the older generations, such as baby boomers."

Mobile phones are unlikely to replace TV or computers, but they will become a complimentary source of media, says Dan Steinbock, author of the new book 'The Mobile Revolution' and a researcher at Columbia University's tele-information institute in New York.

The quick, widespread adoption of cellphones has led to some optimistic projections about their future, he says. But so far they have been used in concert with existing media, such as when TV viewers use their cellphones to vote for contestants in the 'American Idol' TV show.

It is likely that cellphone video may be used to deliver short bursts of video or information, which in turn will cause people to seek out a TV or computer screen for more extended viewing. At least that has been the marketing strategy so far in Asia, where short-form video, in one to five minute bursts, has taken off among 3G phone users.

While standing in line at the ATM, "you might not want to watch an entire episode of 'Seinfeld'," Greengart offers. "but a 2-1/2-minute stand-up comedy routine could be compelling." Some companies are already creating serials in one or two minute episodes. Dubbed 'mobisodes,' they are suitable for viewing in a spare moment, such as waiting in a supermarket checkout line or at a dentist's office. A video-equipped cellphone can be a mobile baby-sitter, too. "I can tell you there's nothing better than sticking 'Sesame Street' in front of a five-year old," Greengart says.

As for what Americans can watch on their cellphones, Sprint offers Sprint-TV, which includes programming from Fox News, Fox Sports, the Weather Channel, (the American) ABC and other sources. Some of this is identical to the televised version; some is specially adapted for use on phones. The Weather Channel, for example, prints its text larger in proportion to the screen size than on TV to make it more readable.

Early video on phones has been herky-jerky - "a slide show with audio," acknowledges Dale Knoop, manager for multimedia services at Sprint. But even before the arrival of 3G handsets, quality has greatly improved, he says. Sprint now sends its video at about 15 frames per second (a conventional [American] TV transmits at 30 frames per second).

Two Minute Television is offering short original programs like 'Genius on a Shoestring,' and 'News with a Punchline,' asking viewers to watch ads instead of paying a fee. SmartVideo Technologies, which is distributing the programming, claims a rate of 15 to 18 frames per second. With 3G, that will rise to 24 frames (essentially equivalent to PAL video which is 25 frames).

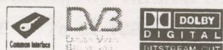
Early signs from Asia and Europe indicate video-phone viewers have little tolerance for conventional television or web adverts, Mr. Steinbock warns. Advertisers must be entertaining or risk the wrath of viewers. "You don't want to turn on your mobile device just to be turned off by ten advertising messages," he says.

In the end, though, people will most want a reliable way to communicate. "Does it have a camera, music player, video, a PDA? Will it make me a sandwich? All of these things are nice but first and foremost it has to be a phone" adds Greengart.

1/ Even the 'small / tiny screen' aspect of cellphones will be a temporary thing. Mitsubishi Electric has announced a 'Pocket Projector' with a pop-in cradle for a video-phone. Using three newly developed light emitting diodes, it can project a video image onto a wall or desktop at sizes up to 40 diagonal inches (1016mm). Battery consumption will be a special

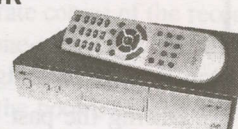
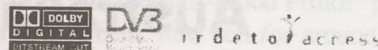
challenge here - perhaps limiting its use to playing online games or watching a breaking news event. The device can also be attached to other mobile devices, such as a DVD player, or digital camera, to let people watch a movie or see snapshots more easily. Mitsubishi believes, "eventually it will be built right into the cellphone."

homecast eM200



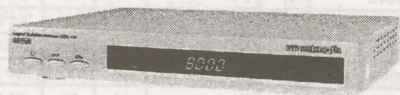
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homecast eM150IR



Compact embedded Irdeto
Satellite receiver with 1 card slot.

wavelength DSR-103



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With Modulator & SPDIF Coaxial output
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wavelength DTR-279



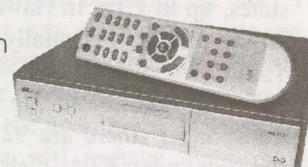
FTA Compact Digital **Terrestrial** Receiver
SD Standard Definition Digital Terrestrial Receiver with
modulator, Wide Hot Key, Teletext & Logical Channel

homecast HT5000



HD High Definition
Digital **Terrestrial**
Receiver with DVI
output.

homecast eM1150



SD Standard Definition
Digital **Terrestrial**
Receiver with
modulator.

Homecast Australia site for terrestrial receivers is at <http://www.homecast.net.au>

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Brilliant concept for FTA promotion!

Is anyone in Australia listening???

During the past 60 days, something very significant has occurred in North America: FTA Ku band satellite hardware sales have taken off, like a shot of fireworks. Yes, dealer-cost complete systems (dish, LNB, receiver) for US\$80 is part of the reason but even if the hardware was free - to dealers - there has to be some incentive at the consumer level to cause the equipment to move from dealer truck to customer home.

UonTV is a part of the reason, a concept so simple that it defies logic as to why somebody did not try this previously. Here it is. For US\$20 you (any you) can purchase 30 minutes (1) of North America-wide Ku satellite TV coverage. You provide the programming materials, on DVD or some compatible form of videotape, select a time slot (some are more expensive than \$20 per half hour) and they do the rest; Intelsat Americas 5 satellite (97W), 12.177Vt, Sr 23.000, 2/3. Seventy-six cm size coverage over most of the 48 mainland states, up to 1.1m in Hawaii and Alaska. It gets better - with larger dishes, essentially all of South America (possibly, Tahiti!)

One glance at the user-content for just this single transponder (there are 92 more Ku on Intelsat Americas 5) suggests why FTA dish systems are an exploding sales package (and, this is one of 22 satellites offering FTA broadcasting - over 200 transponders, many 'loaded' very much like our transponder 27 example, right). The user is a 'Microcaster' totally responsible for his/her content, creation, and supply of the material to the uplink centre (most are sent as Email attachments!).

The response has been significantly ethnic at the start but remains under 25%, so far. A group, any group (coin collectors, civil war history enthusiasts, collectors of sport player cards, 'the Smythe Family') with a camcorder can (and has or will) create their own programming segments. UonTV provides plenty of web site assistance (Adobe Premiere, Apple Final Cut Pro, Pinnacle Studio) for first-time novice 'editors' - some editing software, a PC, and the 'raw video shoots' and you are away. Time of day is a pricing consideration - US\$20 is between 2AM eastern and 7AM eastern, rising in steps through US\$60 (7AM to 5PM) and US\$120 (5PM to 2AM) with higher rates on weekends.

Consider the economics. For \$0.66 each per-month, 30 people with a similar (if 'unusual' interest [or 'fetish']) can share a 30 minute time segment once per month. Each person spends a few hundred dollars on a FTA Ku band dish system, from which thousands of programming channels will be available as a bonus, and then for that 'special 30 minutes' each month, it is 'their TV', exclusively.

To date, home grown soap operas, philosophical ranting, family gatherings, wedding events, people auctioning off personal items (one auctioned off his home, live!), school

1/ Show length is actually 25 minutes for half hour, 55 minutes for hour, 85 minutes for 1-1/2 hour programs, leaving time for UonTV promos at end.

CCN	A	Irdeto 1	1	35	36 E
[Pittsburgh International Telecom test card]			2	43	44
Healthy Living Network	A	F	3	2081	2082 E
VTV 4	A	N	5	4081	257 Vi
Kurdistan TV	A	N	6	4083	259 Ku
Thai TV Global Network	A	F	7	33	34 Th
The Church Channel	A	N	8	47	48 E
Maharishi Open University US	A	F	9	4080	256
Samanyolu TV Amerika	A	N	10	4084	260 Tu
UonTV USA	A	F	12	56	57 E
UonTV BC	A	F	17	4130	4131 E
UonTV BC	A	Irdeto 2	19	4085	261 F
TCS-TV	A		20	262	263 F
Fashion TV America	A	F	22	37	38 Ku
JCTV	A	N	26	113	114 E
TRT FM	A	N	3		2083 Tu
TSR	A	N	3		2084 Tu
Voice of Turkey	A	N	3		2084
Asian FM Radio (WWBM) (Yates)		F	4		72
Radio Iran KIRN 670 (Los Angeles)	A	F	11		46 Fa
WRN English North America	A	N	13		49 E
WRN Multilingual North America	A	N	14		50
WRN Français	A	N	15		54 F
Voice of Russian Jewry	A	N	16		55 E
Bangkok Radio 94 FM	A	N	18		5154 Th
Burg FM	A	N	21		45 Tu
Asian FM Radio (WWBM) (Yates)		F	23		40

Uontv (www.uontv.com) is 'bandwidth for hire' on a 24 x 7 schedule. Rates vary from US\$20 to US\$170 per half hour (prime time, weekends cost more per slot).

drama plays, and families sending 'videos' to family members and grand parents have been typical of the response. What drives this is of course the relatively low-cost Ku band FTA dish systems (the UonTV web site promotes sources for the hardware making it a 'partner' of the 'Microcasters' in support of their endeavours). DIY instructions (one user of UonTV spends his 30 minutes telling people 'how to' install a 76cm dish - one assumes this is a check system for those who would have already had a dish functioning or they would not be able to watch his programme!). To add to the audience, some number of cable TV systems (not a huge number but a few hundred none the less) in North America and the Caribbean carry UonTV 24 hours, 7 days. Erotic video? Apparently there is an 'unwritten rule' regarding this at UonTV although the service operates in an area where copyright is not an issue - provided a show is not simply yanking off copies of copyrighted materials. For now, it has not become a 'late night gathering spot' for folks creating home movies of various acts with small animals and large humans although UonTV does profess to 'follow FCC indecency guidelines' regarding porno content (restricted to 10PM-6AM).

Our support? SatFACTS is acquiring time to broadcast the 15 x 1 hour 'Space Pacific Reports' series during November-December, with the sponsorship of US supplier DMS International. Now - what we need is a similar package on offer for Australia and New Zealand and lots of dish sales!

Digital Tid-Bits

News Corp/Murdoch has invested US\$580 million in online firm Intermix Media (operating 30 separate sites including #5 ranked MySpace.com), and, bid US\$126 million for 56% of realestate.com. Both sites make money, are past start-up phase. Of interest here - News Corp has avoided Internet holdings and was one of only a handful of major media firms to escape dotcom melt-down at end of the 90s.

July 7: London. Major sources for broadcast coverage turned out to be street-cams, normal folks with cellphone's capable of creating video snapshots of the terrific aftermath of bombs exploding. UK media regulator notes, "What is going on is a gradual transfer of power from broadcaster, distributor and supplier, to the viewers - the listener and consumer. It is broadcasting 'democracy' finally at work and it will become the largest single driver in the further development of news service reporting of this decade."

(Australian) Telstra has launched DVB-H (digital broadcasting via handheld) trial. An announced 1,000 handhelds will have access to such TV services as ABC, SBS, Nine Australia, Turner (CNNi and Boomerang) and Sky Channel (racing), Fox Footy, Fox Sports News, E! and Channel V; more likely to be added. You can see the pattern here - aimed at sport fans, news junkies (strangely, Fox News Australia is not initially included), and children/teenagers. The forecast is the service will cover 80% of Sydney.

US President Bush has created a new Office of Copyright Piracy signalling a major push to bring non-conforming countries and regions into line with the US policy in this

area. Christ Israel, ex-Time Warner, to head up drive which pinpoints China as number one target. Israel: "90 percent of all video and audio on sale there is in violation of US copyrights." A companion report suggests Asia may be a larger market than China proper. One report notes, "Harry Potter and the Half-Blood Prince" pirate copies of the recently released book now sell for around one-quarter of the US\$29 price tag throughout India and Bangladesh. Also of note - it took pirates less than two weeks of the book's official release to appear in Asian marketplaces with exact-look-alike copies.

Battle for subscription-satellite radio users heating up in USA. Two competitors, Sirius and XM Radio, have romanced Detroit (and foreign) auto makers to include as standard (first choice) or as optional in-dash mounted satellite receivers. XM currently attracts around 50% of its new subscribers from new automobile purchaser market; Sirius with a weaker stable of auto makers, 25%. In the woodpile as an unknown-impact competitor - 3G mobile delivered web stream radio services and their iPod cousins.

US Supreme Court decision, against software creators of web sharing music transfer software Grokster, in favour of music copyright owners, has begun ripple effects world-wide. Under the ruling, anyone who creates, distributes, shares software which has the capability of offending existing copyright laws, can be charged with breaking the law. The key is whether software in "any way encourages" mis-use of copyrighted materials. The largest distributor of web music, Apple through its iPod service, has reserved comment until it studies the exact language of the unanimous decision. Most agree the legal precedent here will reshape many current Internet activities including the iPod broadcasters.

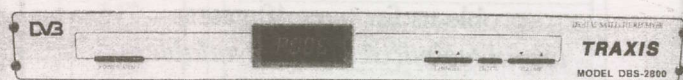


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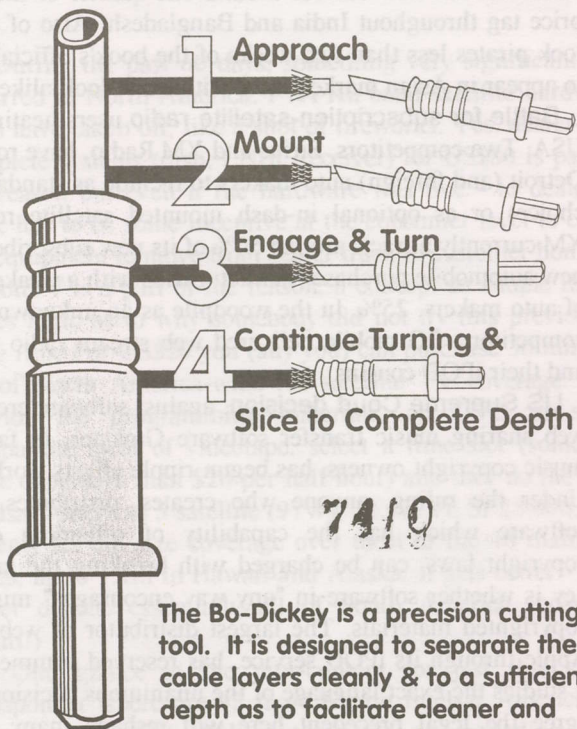
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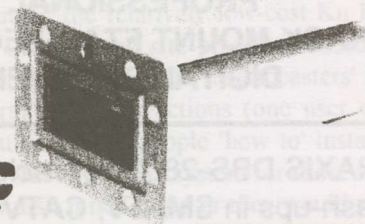
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SatFACTS Pacific/Asian MPEG-2 Digital Watch: 15 AUG, 2005

Bird	Service	RF/IF &Polarity	# Program Channels	FEC	Msym
Ther3/78.5	SkyChAust	3695/1455H	up to 3	3/4	5(000)
	ANT Greece	3672/1478H	1 TV	3/4	13(333)
	TARBS ME mux	3640/1510H	12TV, 12 radio	2/3	28(066)
	Ch Nepal	3626/1524V	1	3/4	15(556)
	Mahar mux	3600/1550H	11TV, 1 rad	3/4	26(667)
	SE asia Mux	3569/1581H	2+ TV	3/4	12(500)
	RR Sat mux	3551/1600H	8TV, 10 radio	3/4	13(333)
	TVK Cambodia	3448/1702H	1TV	1/2	6(312)
	TARBS/Th5	3480/1670H	12 TV+radio	2/3	26(667)
	Thai Global	3425/1725V	up to 79	2/3	27(500)
InSat 2E/83	ETV mux	4005/1145V	6+ TV	3/4	27(000)
	Hyd Dig 2E	3910/1240V	1	3/4	5(000)
	Kairali TV	3699/1451V	1	3/4	3(184)
	Indian mux	3643/1507V	3	3/4	19(531)
	Sky Bangla	3430/1720V	1TV	3/4	6(000)
NSS6/95E	Ant Pac (Greek)	11 104H-Australia	1 TV	3/4	2(800)
As2/100.5E	Guangdong TV	4075/1075H	1TV + radio	3/4	6(000)
	Euro Bougt	4000/1150H	5TV, 19 radio	3/4	28(125)
	SatLink	3960/1190H	3TV	3/4	27(500)
	Reuters News	3905/1245H	1TV	3/4	4(000)
	WorldNet	3880/1270H	4+ 18radio	1/2	20(400)
	APT Asia	3799/1351H	1	3/4	5(632)
	Reuters/Sing	3775/1375H	1	3/4	5(631)
	APT Asia#2	3705/1445H	1	5/6	4(166)
	Macau MUX	4148/1002V	5TV	3/4	11(850)
	Dubai MUX	4020/1430V	4+ radio	3/4	27(500)
	Fashion TV	3796/1354V	1	3/4	2(626)
	Trace TV	3792/1358V	1	3/4	2(400)
	BYU-TV	3767/1383V	1 + 20 audio	1/2	6(530)
	3-ch miniMUX	3752/1398V	up to 3	3/4	5(640)
	Saudi TV1	3660/1490V	7+tests	3/4	27(500)
As3S/105.5E	CETV digital	3680/1470H	1+ TV	3/4	26(670)
	Zee bouquet	3700/1450V	10TV	3/4	27(500)
	Ch News Asia	3706/1444H	1TV (+)	3/4	6(000)
	Azio TV	3716/1434H	1TV (+)	3/4	7(000)
	BT World	3725/1425V	1TV	3/4	4(450)
	TVB 8	3729/1421H	1TV	3/4	13(650)
	Zee Movies	3732/1418V	3TV	3/4	6(500)
	SAB TV	3743/1407V	1TV	3/4	3(300)
	AAJ-TV	3750/1400V	1TV	3/4	2(820)
	Arirang TV	3755/1395V	1	7/8	4(418)
	Now TV +	3760/1390H	up to 10TV	7/8	26(000)
	Star TV	3780/1370V	7(+)/TV	3/4	28(100)
	GXTV	3806/1344V	1TV + 3 radio	3/4	4(420)
	Shaanxi TV	3813/1337V	1TV + 2 radio	3/4	4(420)
	Anhui TV	3820/1330V	1TV + 2 radio	3/4	4(420)
	Jiangsu TV	3827/1330V	1TV + 2 radio	3/4	4(420)
	HLITV	3834/1316V	1TV	3/4	4(420)
	Star TV	3840/1310H	7(+)/TV	7/8	26(850)
	Star TV	3860/1290V	5(+)/TV	3/4	27(500)
	Arabsat MUX	3880/1270H	10+TV, 14Radio	3/4	27(500)
	Dragon TV	3886/1264V	1TV	3/4	4(800)
	Shaandong	3895/1255V	1TV + 6 radio	3/4	6(813)
	CCTV1	3904/1246V	1TV, 1 radio	7/8	4(420)
	Jilin TV	3914/1236V	1TV + 2 radio	3/4	4(420)
	Star TV	3920/1230H	4+ TV	7/8	26(850)
	CNN	3960/1190H	8TV, 1 radio	3/4	27(500)
	StarTV	3980/1170V	6+TV	3/4	28(100)
	Star TV	4000/1150H	8+TV	7/8	26(850)
	Sahara digital	4020/1130V	8TV, 1 radio	3/4	27(250)
	Hubei TV	4035/1115H	1TV + 2 radio	3/4	4(420)
	Tianjin TV	4046/1104V	1TV + 2 radio	3/4	5(950)
	Sichuan TV	4051/1099H	1TV + 1 radio	3/4	4(420)
	Qinghai TV	4067/1083H	1TV + 2 radio	3/4	4(420)
	Hunan TV	4082/1068H	1TV + 1 radio	3/4	4(420)
	Fashion/HK-Asia	4088/1062H	1TV	3/4	2(626)
	Pakistani TV	4091/1059V	4TV, 1 radio	3/4	13(333)
	Sun TV	4095/1055H	1	3/4	5(554)
	PTV National	4106/1044V	1TV, 1 radio	3/4	3(333)
	TVB8 Mux	4111/1040H	4TV	3/4	13(650)
	Indus News	4115/1035V	1	3/4	3(331)
	CCTV bqt	4129/1021H	4 TV, 4 radio	3/4	13(240)
	Zee Bqt #2	4140/1010V	8+TV	3/4	27(500)
	Henan TV	4166/984V	1TV + 8 radio	3/4	4(420)
	Fujian TV	4180/970V	1TV + 2 radio	3/4	4(420)
	Jiangxi TV	4187/963V	1TV + 2 radio	3/4	4(420)
	Liaoning TV	4194/956V	1TV + 2 radio	3/4	4(420)
Cak1/107.5	Indovision (S-band)	2.535, 2.565, 2.595, 2.625, 2.655	33(+)/TV	7/8	20(000)
T Kom 108E	IndoBqt	3460/1690H	up to 6	3/4	28(000)
C2M/113E	TPI	4185/965V	1	3/4	6(700)
	TVE Asia-Africa	4160/990H	1	3/4	5(632)
	Anteve	4144/1006V	1	3/4	6(510)
	Kabelvision Mux	4080/1070H	7+ TV	7/8	28(125)
	Indostar	4074/1076V	1	3/4	6(500)
	Satelindo	3935/1215H	1	3/4	6(700)
	Bali TV	3926/1224H	1	3/4	4(208)
	Indo MUX	3880/1270H	3+ TV	7/8	28(121)
	TVRI	3765/1385H	1TV	3/4	5(555)

Receivers and Errata

CA (#1, 3); FTA audio #2 (dm)
Late July 04: room for more (FTA)
CA + 23FTA(AITV, IRB3, Vision Norge)
New 03/03; FTA
Thai + Indian services; FTA inc. Vibe TV, Sindh TV
MRTV3, MRTV (DM)
3TV, Sradio inc. Hellas TV Greece FTA
FTA
3FTA: TV5, VTV4, ATN Bangla
FTA (reaches SE Australia)
Several ETV now here; wide beam
SCPC, OK E. Aust. wide beam
SCPC, OK E. Aust wide beam
corrections 12/02
New - November 2002
(still) FTA 11-04; was 11 083H
July 04: FTA
FTA TV + radio; RAI PID changes April 2005
Real Madrid (V709, A770) English **FTA**
Was 3923H, sometimes **FTA**
FTA; multiple audio services V2360, A2320
Sometimes **FTA**; also 3895Vt
FTA & CA
FTA and CA - NASA reports included
5 chs TV, FTA, some tests
FTA; Dubai Sports Ch some English, soccer-
FTA as of May 1, 2003
new here Dec 2004; Euro-French music videos
Increased coverage; great variety audio chs(03-05)
Sun-TV, Surya TV, KTV (FTA)
FTA MCPC; Yemen, MBC EUROsport tests
replaces analogue same freq; V33, A32
Now SECA 2 CA (10-04)
English + V1160, A1120, 525, 625 versions
Was parallel to 3640Hz analogue (now gone)

Conax CA, all Hindi films
SAB may no longer here here; moved to NSS-6?
New April 2005; English, urdu
FTA SCPC; New PIDs V3601, A3606 June 2003
CA + **FTA**; English includes NOW, Etmg, Living As
NDS CA (Pace DVS211, Zenith)
Guangxi TV; was As2
Was As2
Was As2
Was As2
Was As2; HeiLong
NDS CA (Pace DVS211, Zenith)
NDS CA (Pace DVS211, Zenith)
New April 2004: link to Optus B3 Globecast
Shanghai
Apparently Mongolia

Star Sports Asia (+), **FTA** NTSC, VS14, A670 (10-04)
PowVu CA; new SR Apr 29; CNN radio **FTA**
NDS CA; Star News India **FTA** VPID 514, APID 648
NDS CA w/ **4(Chinese) FTA**
New Sr September 2004
Was As2
new December 2004
Was As2
Was As2
Was As2
Was As2
New July 2005
new Sr, channels, Nov 2003
"History Channel" - SCPC, some English

MATV Chinese movies FTA +CA; new Sr 05-04
Hindi (+ "Plus"), day parts
moved from 4115
Now SECA 2 CA (10-04); 1 occ. FTA (varies)
Was As2
Was As2
Was As2
Was As2
NDS CA using RCA/Thomson,
Pace IRDs; **2.535 has 2 FTA**
also 3586H/17.500, 3496H/19.615
FTA SCPC; NT/NC only
New August 2003
change from 4055V; FTA SCPC
also try 3500H, 27.000, 3/4; strong NZ
FTA (new 06-03); V2201, A2202
test card - only - reported
FTA, may not be active full time
FTA; Sr change 01/03; erratic
bounces btwn FTA and CA; unreliable (12-04)

Bird	Service	RF/IF & Polarity	# Program Channels	FEC	Msym
	Brunel/Sing	3733/1417H	1TV	3/4	6(,000)
	SCTV	3726/1424V	1TV	3/4	6(,620)
	RCTI	3473/1677H	2	3/4	8(,000)
As4/122E	CCTV internal	4100/1050V	6	3/4	27(,500)
Jc3/128	Miracle Net	3996/1154V	3 up to 6	5/6	22(,000)
	Asian bqt	3960/1190V	up to 8	7/8	30(,000)
Ap6/134E	Multiple	see right	3731V, 3745V, 3758H	3765V, 3779V, 3820V	3840H, 3886V
T18/138	Tests	3460/1690V	8	3/4	30(,000)
	LTV Laos	3804/1346V	1		
Je2A 154	BYU-TV	3915/1245V	1+ 20 languages	3/4	4(,166) (?)
MeasSs2	Astro Mux	11.602H	up to 1 TV	3/4	41(,500)
	VTV MUX	11.522V	3 TV	3/4	9(,766)
R3/152	AuroraBiz	12.407V	4 TV, 10 radio	2/3	30(,000)
	UBI/Tests	12.425V	up to 13 TV + radio	3/4	22(,500)
	GloboCast 2	12.525V	13 TV, 8 radio	2/3	30(,000)
	GloboCast (feeds)	12.550-555V	1TV	3/4 & 2/3	6(,110/670)
	GloboCast	12.564V/T13	2+ TV	2/3	30(,000)
	UBI/Tests	12.613H/T14L	11+TV	3/4	22(,500)
	UBI/Tests	12.640H/T14U	11+TV	3/4	22(,500)
	GloboCast 1	12.658V/T7	14TV, 15 radio	2/3	30(,000)
	UBI/Tests	12.674H/T15L	11+TV	3/4	22(,500)
	UBI/Tests	12.701H/T15U	11+TV	3/4	22(,500)
	WA ABC	12.702V	1 TV, 1 radio	7/8	14(,288)
	WA SBS	12.720V	4TV, 2 radio	5/6	12(,600)
	WA GWN/WIN	12.738V	2TV	7/8	14(,295)
CU156E	Optus test bed	12.288V/T1L	6+ (ABC) TV	1/2	28(,650)
	Aurora	12.324V/T1U	4+ (ABC) TV	1/2	24(,450)
	Pay TV	12.365V/T2	11TV, 2 radio	3/4	27(,800)
	Aurora Home	12.407V/T3	5 TV, 13 radio	2/3	30(,000)
	Pay-TV	12.447V/T4	5TV, 4 data	3/4	27(,800)
	Pay TV (test)	12.487V/T5	3+ TV, data	3/4	27(,800)
	Aurora 2	12.527V/T6	7TV, 20 radio	3/4	30(,000)
	Pay-TV	12.567V/T7	10 TV	3/4	27(,800)
	Pay-TV	12.607V/T8	10 TV	3/4	27(,800)
	Pay-TV	12.647V/T9	10 TV	3/4	27(,800)
	Pay-TV tests	12.720V/T10	6+TV, data	3/4	27(,800)
	Austar	12.305H/T11	6TV, 24 data	3/4	30(,000)
	Pay-TV	12.358H/T12	10 TV	3/4	27(,800)
	Pay-TV	12.398H/T13	10 TV	3/4	27(,800)
	Pay-TV	12.438H/T14	6TV, 3 data	3/4	27(,800)
	Pay-TV	12.478H/T15	10 TV	3/4	27(,800)
	Pay-TV	12.518H/T16	10 TV	3/4	27(,800)
	Pay-TV	12.558H/T17	10 TV	3/4	27(,800)
	Pay-TV	12.598H/T18	TV	3/4	27(,800)
	Pay-TV	12.638H/T19	10TV, 30 radio	3/4	27(,800)
	Pay-TV	12.688H/T20	11TV	3/4	27(,800)
BI/160	7 Central DTV	12.354H	1TV	3/4	5(,100)
	Occ. feeds	12.380H	1 TV - *	3/4	6(,111)
	Occ. feeds	12.384V	1 TV - *	3/4	6(,111)
	Net 7 service	12.397H	1	3/4	7(,200)
	Imparja mux	12.379H	2TV + 8 radio	3/4	5(,424)
	7 digital feeds	12.397H	1TV	3/4	7(,200)
	Feeds to NZ	12.411V	1 TV	3/4	6(,111)
	SBS Mux	12.420H	3+ TV, 2+ radio	5/6	12(,600)
	TVNZ DTH	12.456V	5+TV	3/4	22(,500)
	TVNZ Tests	12.483V	up to 11TV	3/4	22(,500)
	Sky NZ	12.519/546V	7TV/7TV	3/4	22(,500)
	Sky NZ	12.581/608V	6TV/6TV	3/4	22(,500)
	Sky NZ	12.644/671V	9TV	3/4	22(,500)
	ABC HDTV	12.610H	5TV	7/8	14(,3288)
	Sky NZ	12.707/734V	8+TV	3/4	22(,500)
PR/166E	ABS-CBN	12.575H	4+TV, 4+ radio	2/3	13(,845)
	JEDI/TVB	12.686H	11+ TV	3/4	28(,126)
	ABC A-P	4180/970H	2TV, 2 radio	3/4	27(,500)
	Disney Pac	4140/1010H	typ 6 TV	5/6	28(,125)
	Taiwanese MUX	4080/1070H	12+ TV	5/6	30(,000)
	NHK Joho	4060/1090H	7TV, 1 radio	3/4	26(,470)
	FOX Mux	4040/1110V	up to 5TV	7/8	26(,470)
	NET+	4121/1029V	1 TV	3/4	4(,774)
	ESPN USA	4020/1130H	8+TV, data	3/4	26(,470)
	Discovery	3980/1170H	8 typ.	3/4	27(,690)
	CalBqt/Pass8	3940/1210H	up to 3+ FTA	7/8	27(,690)
	CNBC HK	3900/1250H	up to 7TV	3/4	27(,500)
	FilipinoMUX	3880/1270V	up to 8TV+radio	5/6	28(,694)
	TaiwanBqt	3860/1290H	12TV + 30 r	5/6	28(,000)
	CCTV Mux	3829/1321H	up to 4+ 1 radio	3/4	13(,240)
	TVBS-N	3836/1314V	1FTA, 4+ CA	3/4	22(,000)
	EMTV PNG	3808/1342V	1 + 2 radio	3/4	5(,632)
	CNNI	3780/1370H	3, up to 5 TV	3/4	25(,000)
	Discovery Asia	3764/1386V	Up to 6 TV	3/4	19(,850)
	MTV	3740/1410H	8	2/3	27(,500)
P2/169E	WA Mux Pv	12.281V	3+ TV, radio	2/3	27(,500)
	Ariang TV	12.401V	1TV	3/4	4(,400)
	ABS-CBN	12.575H	4TV, 2 radio	2/3	13(,845)
	Test mux	12.715H	6+ TV	3/4	30(,000)
	TARBS feeds	4090V/1060V	9TV + radio	3/4	21(,000)
	BBC SCPC	3986/1164H	1TV	1/2	5(,700)
	Middle East	3836/1314V	4 typ	3/4	13(,331)

Receivers and Errata

FTA ; Singapore 23hrs, Brunel 1 hr, Brunel V1200 was on 4048V; New Caledonia, parts of Australia
FTA SCPC; Australia, New Caledonia, some Eng
Irdeto 2 + TVSN occ. FTA; also, 4020V
PowerVu; some FTA (Ch. 1 & 3)
CA & FTA NTSC; Japan, Taiwan
Analogue 3960H, 3980V, 4000H (ApStar 6)
also try 3660/3540V, Sr 30,000, 3/4; some FTA
VPID 512, APID 4112
Strong NZ & Australia; may now be 1/2, 6.525
Aust East beam - 3 FTA + 14 CA
WA only? Skew path, intended Asia
differs from 12.407 C1; tune ch FTA; NZ+Au
T11/lower testing late May 2005
NZ + Au, FTA, Mcript CA
occ feeds, NZ + Au; recently 12.553V
New Feb 05; TVN racing, TV Korea, Telepace
High performance beam; not NZ
High performance beam; not NZ
NZ + Au (Mcript, PowVu capable)
High performance beam; not NZ
High performance beam; not NZ
ABC WA tests, FTA
SBS, radio tests WA FTA
Irdeto V2 CA, tests (GWN, WIN)
Widescreen ABC service feeds x 6 + tests; 29 radio
CA, replaced Aurora T10 1 February 2005; 19 radio
Tests; SBS-NDS CA, others FTA when here
NZ (90cm) + Australia (**Only svc left on NZ; C1**)
Australia NA only (leakage to Norfolk, New Cal)
Australia NA only (leakage); 9-Net x 3 widescreen
Arrow radio (still here), tone FTA
Pay-per-view movies; CA
Pay-per-view movies; CA
Pay-per-view movies; CA
currently repeating 12.438Hz; TVSN FTA
Austar inter. Expo FTA
NDS CA + Mcript, CA
CA, subscriptions available Australia, Norfolk
Sky News active; 'Help x 2' FTA
CA, subscriptions avail Au, Nrlk; **TVSN FTA**
CA, subscriptions available Australia, Norfolk
"Home"CA, subscription available Australia, Nrlk
CA, subscriptions available Australia, Norfolk
CA, subscription available Australia, Norfolk
CA, subscription available Australia, Norfolk
Central beam; originally to feed Tasmania
* - plus 12.451H, 12.460H
* - plus 12.293V, 12.402V, 12.411V
Full schedule less commercials - links; may be CA
PIDs vary; also try 12.360, 12.370
occ. digital feeds; typ fla
Often NTSC; USA-Australia-NZ
Also 12.437H, 12.456H same params; HDTV+WS
FTA 7 channels (TVNZ x 4); +Maon_DW, CCTV9
Testing late June; 16:9 added late July
NDS CA, subscription available NZ
NDS CA, subscription available NZ
NDS CA, subscription available NZ
also see 12.626, 643, 670, 688, & 706H
NDS CA, subscriptions available NZ
CA
June 2002-Irdeto-2 CA
Dateline west; also east PAS2, 3901V
PowVu CA
Tests - CA service announced
PowVu CA & FTA; subscription available
was PAS-2, previously 3992V; **feeds FTA**
NET25 + FTA; new PIDS April '03; reload
PowVu CA; ch 11 DCP-CCP bootload; audio **FTA**
PowVu/CA (some audio **FTA**)
PowVu CA & FTA (EWIN + CBS + TBN +)
NDS CA (6 channels); one test card occ FTA
Mux FTA V1960, A1920 + radio FTA
Mixed **FTA** & CA; STC gone (CA)
PowVu FTA, replaces PAS-2 svc
Difficult because of CCTV cross pole
PowVu CA
PowerVu; some audio **FTA**
PowerVu; Asian MUX; new parameters Nov '03
8 **MTV China FTA V289, A290**; rest CA
PowVu CA, WIN, ABC NT, SBS; status unknown
Test - may not stay permanently
Temp **FTA**; subs Aust 011-800-2270-0722
initially with 6 NTSC colour bars
Occ **FTA** (Chile +); BIG power reduction Nov 03
BBC World moved here January 2005
Irdeto 2 CA - **subscriptions avail; Strong Tech**

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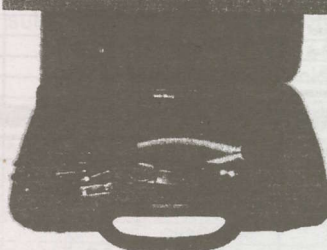
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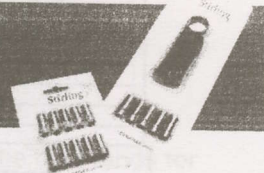


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Bird	Service	RF/IF & Polarity	# Program Channels	FEC	Msym
(PAS2/169E)	Adventists.tv	4040/1010H	1	2/3	5(900)
	Feeds	3868/1182H	1	2/3	6(620)
	Feeds	3939/1211H	2 (typ NTSC)	2/3	6(620)/7(498)
	Cal PowVu	3901/1249H	up to 8	3/4	30(800)
	HK bouquet	3850/1300H	up to 8	2/3	24(900)
	Korean Bqt	3771/1379H	1	3/4	6(510)
1804/174E	IPSTAR	12.619H	1	2/3	25(220)
	Tests-NZ beam	12.646H	1	3/4	22(418)
	RFO Poly	4027/1123R	1TV	3/4	4(566)
1701/180E	TNTV	11.060&11.514V	9	3/4	30(000)
	TVRFO	11.136V, 11.174V	6+TV, 3+ radio	2/4	23(149)
	Canal+ Sat	11.610H	16TV, 1 radio	3/4	30(000)
	PBS	12.648HH	16TV possible	3/4	28(066)
	TVNZ/BBC	4186/964RHC	1	3/4	5(632)
	TVNZ	4178/972RHC	1	3/4	5(632)
	AFRTS DTS	4175/975L	3 TV, 3 radio	2/3	3(680)
	TVNZ/Aptn	4170/980RHC	1	3/4	5(632)
	Fiji Sky Pacific	4095/1055LHC	6TV + future radio	3/4	16(505)
	Fiji Sky Pacific	4055/1095LHC	6TV + future radio	3/4	16(505)
	TVNZ/feeds	4052/1098RHC	1	3/4	5(632)
	TVNZ feeds	4044/1106R	1	3/4	5(632)
	NZ Prime TV	4024/1126L	1	2/3	6(876)
	NBC to 7 Oz	3960/1190R	1	7/8	6(447)
	TBN Mux	3927/1223R	3TV	2/3	9(100)
	WorldNet	3886/1264R	1TV, 37 radio	3/4	25(000)
	Ioarara	3772/1378L	1	3/4	4(566)
	NASA TV	3854/1296R	1 TV	3/4	2(000)
	TVNZ	3846/1304R	1	3/4	5(632)
	NBA (Barker) Ch	3803/1347R	1	3/4	6(111)
	USA feeds	3749/1401R	4?	?	26(400)
NSS-5/177W	Pacific IP Data	3763/1387R	none-data	3/4	27.5
	BYU-TV	4185/965R	1TV, 20+ audio	1/2	6(525)
	IPSTAR Tests	12.691V	8TV	5/6	17(600)
	Russian TV tests	12.744V	2 TV	3/4	3(977)

Receivers and Errata
New December 2003; 24/7 "Hope Chs."
FTA (occ sport), also try 3863, Sr6 100
FTA-typ NTSC-occ sport, live Shuttle
PowVu CA + FTA (includes BBC-W 05-05)
was 4148Vt, some FTA
Korean MUX, reload 12-04; new Sr
Tests, late May start; also 12.646H
Testing possible data links: June 2003
SE spot beam; was 4027LHC
east spot; 10TV + r each, vertical pol.
FTA 11.136 Tahitian beam, 11.174 west beam; 12.04
1+ FTA, MediaGd "2"; + 10.975 weaker
Testing Fiji region pay-TV (MDS) package (Oct '04)
DMV/NL early vers., occ feeds, typ ca
DMV/NL early vers., occ feeds, typ ca
DTS Direct to Sailors, audio previously FTA - gone
DMV/NL early vers., occ feeds, typically ca
Nagrasvision CA (Feb 1, 2005) New PIDS
All now (including Fiji 1) CA; 7 Feb, 2005)
DMV/NL early vers., occ feeds, typ ca
SCPC, mixed CA and FTA feeds
PowVu CA, Auckland net feeds
CA, Latch encoded
Church Ch (1560), TEN (1760), JCTV (1860) W hemi
New PIDS Dec 03 very strong NZ, Pacific
FTA SCPC, East Hemi Beam-Tahiti
24/7 live NASA - West Hemi bm (can be difficult)
SCPC, mixed CA & FTA, feeds
NBA feeds - probably CA - new Nov 2003
16-QAM (not MPEG-2 compatible)
Data only but useful for dish alignment
Global beam - requires sizeable dish
CA Tests - Taiwan TV, data coming?? (NZ beam)
Tests - may not last (May 2005); NZ bm; PKVS, REN

MPEG-2 DVB Receivers: (Data here believed accurate; we assume no responsibility for correctness!)

AV-COMM R3100. FTA, excellent sensitivity (review SF May 1998); new version Sept '99. AV-COMM P/L. 61-2-9939-4377.

AV-COMM Tiny Tot. FTA, 12Vdc operated, palm sized, low power consumption; review SF#120. Contact # above.

AV-COMM R3100(A). FTA, good sensitivity, ease of use exc (review SF May 2002). See above contact.

Coship 3188C. Review SF#107. Blind search FTA rcvr, works well. Available from Satlink NZ. www.satlinknz.co.nz (also available Irdeto 2 as well as FTA)

Divitone: "Left-handed" review SF#115; does "code key" entry. Available <http://www.satmax.ws>

eMTECH eM-100B (FTA), eM-200B (FTA + Ch2), eM210B (FTA + 2xCI + positioner); KanSat 61-7-5484 6246 (review SF#89)

Fortec Star Lifetime. Two versions, both blind search, code-key programmable, one X 2 CI. Review SF#119. www.aDigitalLife.com

Humax ICR1 5400 (Z). Embedded Irdeto + 2 CAM slots; initial units had NTSC glitch, now fixed. Widely available; new software avail 04-04. SF#76.

Humax ICR1 5410 (Z). Adaptable version capable of holding multi-CA systems (SF#98, 99). Widely available; original importer Scitec (www.scitec.com.au).

Hyundai-TV/COM. HSS100B/G (Pacific), HSS-100C (China) FTA. Different software versions, 2.26/2.27 good performers. 3.11 and those with Nokia tuners also good; later 5.0 not good. SATECH (V2.26)

Hyundai HSS700. FTA, PowerVu, SCPC/MCPC. Review SF March 1999. Kristal Electronics, 61-7-4788-8902.

Hyundai HSS800CI. FTA, Irdeto (with CAM) + other CA systems, PowerVu, NTSC. Kristal Electronics, above; review SF#63.

INNOCIA IDS3088. Review SF#111. Blind search FTA receiver. High quality Irdeto; available Phoenix Technologies, and Satmax (<http://www.satmax.ws>)

ID Digital CI-24 Sensor. New August 2003; new lower noise tuner, extra sensitivity, CI Interface slot Irdeto 1 & 2; review SF#109. Scitec 61-8-9409-6677.

MediaStar D7.5. New (May 00) single chip FTA; review June 00 SF. MediaStar Comm. Int. 61-2-9618-5777

MediaStar D10. FTA and Irdeto embedded CA. VG receiver; see review SF#96, August 2002. Contacts immediately above.

MultiChoice (UEC) 660. Essentially same as Australian 660, not grey market contrary to reports. Scitec tel 61-8-9306-3738

Nokia "d-box" (V1.7X). European, FTA, may only be German language, capable of Dr. Overflow software. SF#95, p. 14.

Nokia 9200/9500. When equipped with proper software, does Aurora, originally did pay-TV services provided software has been "patched" with "Sandra" or similar program. See SF#95, p. 14, SF#96 p. 15. SatWorld 61-3-9773-9270 (www.satworld.com.au)

Pace DGT400/DVR500. Originally Galaxy (Now Foxtel+Austar). Irdeto, some FTA with difficulty (Foxtel Australia 1300-360618). UECs replaced; Sept 18 (2003) "drop-dead" day; all were to have been "turned off" on that date (in fact, those with V1.13 CAMs may still be working; still does radio including CA, not TV).

Pace "Worldbox" (DSR-620 in NZ). Non-DVB compliant NDS CA including Sky NZ, no FTA; similar "Zenith" version (see SF#115, p. 15).

Phoenix 111, 222. PowVu capable, NTSC, graphics, ease of use. (111 review SF#57). SATECH (below)- 222, terminated

Phoenix 333. FTA SCPC, MCPC, analogue + dish mover. Detailed SF review SF#51. SATECH 61-3-9553-3399.

Pioneer TS4. Mediaguard CA (no FTA), embedded Msym, FEC, only for Canal+Satellite (AntenneCal ++687-43.81.56)

PowerVu (D9223, 9225, 9234). Non-DVB compliant MPEG-2 unless loaded with software through ESPN Boot Loader (see below). Primarily sold for proprietary CA (NHK, CMT etc). For service only - call Scientific Atlanta 61-2-9452-3388. For revision model D9650, see Scientific Atlanta (below).

PowTek. Blind Search Chinese sourced, field tests rate it highly. Source jason@aDigitalLife.com

Prosat 2102S. FTA SCPC/MCPC, NTSC/PAL, SCART + RCA. Scitec 61-8-9306-3738

SatCruiser DSR-101. FTA SCPC/MCPC, PowVu, NTSC/PAL. (Skyvision Australia 61-3-9888-7491, Telsat 64-6-356-2749); no longer available.

SatCruiser DSR-201P. FTA SCPC/MCPC, PowVu, NTSC/PAL, analogue, positioner - (Skyvision - see above); no longer available

SATWORK ST3618. Blind search FTA receiver. Fast search, problems, especially in "memory-filing" system; review SF#111. Available DMSi at tim@dmsiusa.com

SATWORK ST3688. Blind search, 3000+ ch memory, multi-format RF modulator, improved version 3618. Review SF#113; available DMSi (above).

Scientific Atlanta D9223, D9234, D9225. Orig. PowerVu, superceded Dec 2003 by D9850. Commercial receiver, available TVO 61-2-9281-4481, John Martin

Strong Technologies SRT2620. SCPC, MCPC FTA, exc sensitivity, ease use, programming. Review SF#91 (ph. below).

Strong SRT 4600. SCPC, MCPC, PowerVu; exc graphics, ease of use, review SF#64. Strong Technologies 61-3-8795-7990.

Strong 4800. SCPC, MCPC, embedded Irdeto + CAM slots, does code-key with additional software, Aurora. Strong Technologies 61-3-8795-7990.

Strong 4800 II. SCPC, MCPC CAM slots x 2 for Aurora +, Zee, Canal +, code key with additional software. Strong Technologies (above); review SF#103.

Strong 4890. SCPC, MCPC, 30Gb PVR, 2 CAM slots, DiSEqC 1.0, 1.2 (review SF#84), does code key with additional software; Strong Technologies, # above.

UEC Atlas/Titan (1000). New July 2003, replacing DGT400 for Austar. No SCART, L-band loop; also available Rural Electronics 61-2-6361 3636.

UEC642. Designed for Aurora (Irdeto), approved by Optus, w/own software, C-band FTA; faulty P/S. Norsat 61-8-9451-8300.

UEC660. Upgraded UEC642, used by Sky Racing Aust., Foxtel/limited FTA. (Nationwide - 61-7-3252-2947); P/S problems.

UEC700/720. Single chip Irdeto built-in design for Foxtel; unfriendly for FTA. Power supply problems, seldom sold to consumers; propensity to fall off back of trucks.

Voyager. Two models (08-05); one FTA auto scan, 6000 ch memory, one multi-CA format CAM. [Satlinknz.co.nz](http://www.satlinknz.co.nz)

Winersat DigiBox 200. C + Ku basic receiver but includes Teletext for NZ TVOne, 2 VBI. Satlink NZ, fax 64-9-814-9447; long term teletext problems (loses TT).

"X" Digital. When modified with "aftermarket" Internet software, does Aurora and other V-1 CA without card; review SF#119. Strong Technologies (61-3-8795-7990).

Accessories:

Aurora smart cards. MCRYPT (Irdeto V2) cards now available (Jan 2005); Scitec 61-8-9409-6677.

PowerVu Software Upgrade: PAS-8, 4020/1130Hz, Sr 26.470, 3/4; pgm ch 11 and follow instructions (do not leave early!)

PowerVu (Pacific) repair service: Cable & Sat Svcs. Darius West. 61-2-9792-1421 (Email darius@cases.net.au)

WITH THE OBSERVERS

AT PRESS DEADLINE

Country (music) new on 1701, 4175L within AFRTS bouquet; FTA now but possibly not for long (APID 1320). TVN horse racing now available to Austar subscribers; \$1 extra per month. AJK TV, in Kashmiri & Urdu now FTA As2, 3777.5V, Sr 3.333, FEC 3/4. Service also being linked to USA, Europe.

Launches: Much delayed 'mother of all satellites', iPStar to 119E with 87Ku, 10 Ka beams on board was most recently scheduled via Ariane for August 10-11 - while this is being printed. Few doubt when this one finally ends up where it is supposed to be, working, there is a revolution in personal communications to follow.

Telkom 2, to 118E, with 24 C-band transponders now rescheduled to "October"; to replace badly ailing Palapa B4.

Insat 4A to 83E now scheduled 14 November with 12 each C and Ku.

AsiaSat 2/100.5E: PTV-DSNG FTA feeds 3773V, Sr 3.333, 3/4 (V=308, A=256)." (**BRichards**, SA) 'RealMadrid (some English content) 3960H, Sr 27.500, 3/4; V=769, 770." (**Shirley**) "Fashion TV HK + Asia now on 3796V, Sr 2.626, 3/4; V=123, A=133." (**Pietro**)

AsiaSat 3R/105.5E: "Fashion TV (FTA) 4.088H, Sr 2.625, 3/4." (**BRichards**, SA) "NCR Samay Sahara now on 4020V, Sr 27.250, 3/4 FTA." (**Harold**, NT)

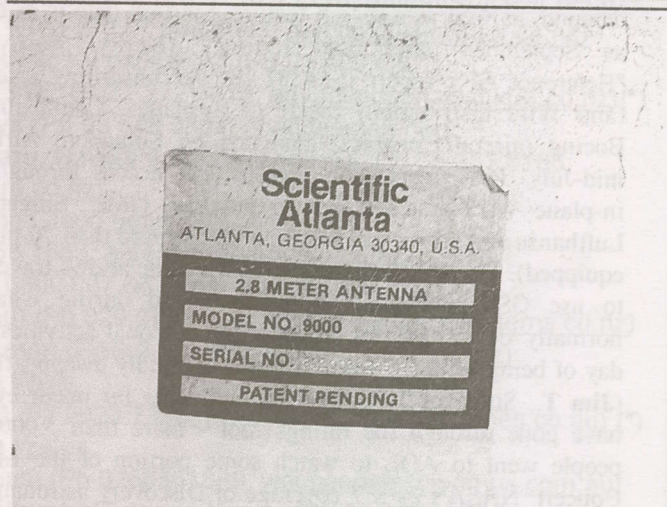
Optus B1/160E: "TVNZ has been testing 16:9 ('wide screen') on 12.483V, Sr 22.500, 3/4 using various documentary category programming; if this was previously loaded, try reloading (V=512, A=650)." (**CSutton**, NZ) (**Editor's note:** Audio rate began as 192kbit which hardly matches the video brilliance; 384kbit should be a minimum here.) "Astralinks FTA V8 car racing feed, 12.371H, Sr 6.670, 3/4 (V=519, A=647)." (**BRichards**, SA) "GlobeCast Horse Racing feed 12.357V, Sr 6.666, 3/4 FTA V=308, A=256." (**BRichards**, SA)

Optus B3/152E: "Portuguese channels RTPi and SIC International on T11/lower (12.425H) within UBI bouquet should now be CA (scheduled end of July)." (**IF**, Qld.) "12.564H, Channel One (Iranian, 7) /Dhamma (Thai, 9)/Healing (11) channels now FTA: Irish based Setanta Sports Irdeto 2 CA; Sr 30.000, 2/3." (**Jorge**)

Optus C1/156E: "T3/12.407V, 30.000, 2/3 - BTVI channel has changed from 'WOBX Qndslnd' to 'Optus Sydney' with new PIDs of V=96, A=97 (Sydney) and V=64, A=65 (Qld)." (**AI**, NSW)

Thaicom 3/78.5E: "Wahdat Radio now on 3600H, Sr 26.667, 3/4 with APID 761." (**BRichards**, SA)

Soapbox: "I met one of the Directors of Mirchee TV (Auckland terrestrial Ku service) recently, he in a panic. A friend had asked for assistance in getting a 35cm dish



End of an era - but available in the thousands for 'taking down'. Scientific Atlanta full commercial grade 2.4 > 4.1m Az-El mount dishes litter the USA commercial landscape waiting for a new home - or a collective trip to a tip.

functional and I obliged with spectrum analyser in tow. The director: 'I have customers waiting for installation and we do not know how to align the dish, can you please help me?' We did dish alignment using both of the towers (Sky Tower and BCL's tower site) and I then offered to help them do an installation at a customer location. Over the weekend I carried out my own tests and found that as long as I have line of sight, reception is achievable with a 35cm dish set to 0 degrees elevation. In some places I had to go up two metres to find a suitable signal, however." (**D. Prased**, Auckland) (**Editor's comment:** Mirchee seems to be heavily loaded with director/management talent and very few folks with field-practical experience. Perhaps what they need is someone with a history in this business, like yourself or Tony Dunnett, to head up a division that deals with installations. All of the programming access in the world means little if there are few viewers able to receive the signals! Oh yes - rumours that Mirchee will relay the Fiji TV One 6PM [Suva time] newscast are unfounded - at this time.) "Things not to do on your next vacation to Malaysia: smuggle in satellite equipment. A 21 year old was arrested charged with 'smuggling 22 giant-sized satellite dishes made in China'

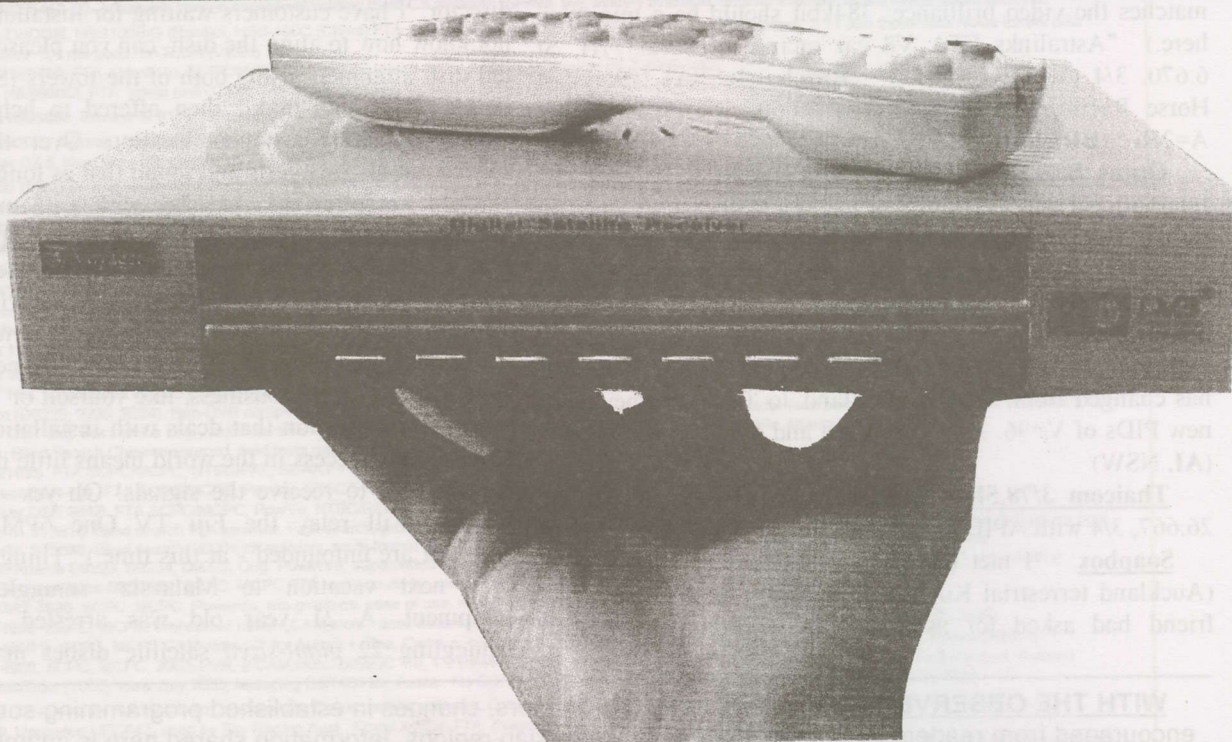
WITH THE OBSERVERS: Reports of new programmers, changes in established programming sources are encouraged from readers throughout the Pacific and Asian regions. Information shared here is an important tool in our ever expanding satellite TV universe. **Photos of yourself, your equipment** or off-air photos taken from your TV screen **are welcomed**. TV screen photos: If PAL or SECAM, set camera to f3.5-f5 at 1/15th second with ASA 100 film; for NTSC, change shutter speed to 1/30th. Use no flash, set camera on tripod or hold steady. Alternately submit any VHS speed, format reception directly to SatFACTS and we will photograph for you.

Deadline for September 15th issue: September 4th by mail or 5PM NZT September 5th if by fax to 64-9-406-1083 or Email skyking@clear.net.nz.

estimated to be worth Malaysian 88,000. The dish importer was nabbed because another illegal importer, caught with 600 walkie-talkie sets also made in China, turned his compatriot in return for a lighter sentence." (**Benjamin, Cairns**) (Editor's note: As best we could confirm, 'giant-sized' translates to 2.1 and 2.4 metre.) "CNN.com is in a major web expansion move, creating an entirely new video-on-the-web service. Four separate video streams will be available, covering the day's major news stories, specific reports on download demand, as well as a search feature. Start-up date is as early as September; now Beta testing." (**Kerry, Nashville**) "Reference SF's report (SF#131, p. 6) concerning satellite (and WiFi distribution) inside of airplanes. Connexion, a Boeing (aircraft) product, launched on Singapore Airlines mid-July. Passengers with laptops can access through an in-plane WiFi system links so provided (JML, Singapore, Lufthansa and Austrian airlines to date - more than 70 planes equipped). The system uses pico WiFi cells, allows travellers to use GSM telephone while on board during what is normally 'down time' for business and personal activities: the day of being isolated while in flight is rapidly disappearing." (**Jim T., Singapore**) "Online net audiences for major events have gone through the ratings roof - more than 5,000,000 people went to AOL to watch some portion of the Live-8 Concert. NASA's 24 x 7 coverage of Discovery astronauts at the International Space Station has been available in endless streams (the user selects the one they wish). Telephone giant Verizon has recently made ESPN, Nickelodeon and 'The Daily Show with Jon Stewart' available to cellphone and home

PCs. And these are but a few of the current day to day examples being announced. The cliff point has been reached - as of last December 30% of all US homes now have high speed broadband installed and the rate of growth during 2005 has increased. As AOL's Jon Miller has been saying, 'Everybody is (now) recognising it is for real - you need to be in the game'. There seems to be no stopping the spread of this technology - the cellphone really has become 'the third screen' for tens of millions." (**Emery Johnson, Chicago**) (Editor's query: Anyone know what the percentage of homes in NZ and Australia with broadband installed happens to be right now?) "Correction (SF#131). TBN (+ the Church Channel, JCTV) are in fact on a western hemi beam, not eastern; I701. 3927RHC, Sr 9,100, 2/3." (**Howard Fine, Los Angeles**) (Editor's note: All of which makes reception in American Samoa [as reported here] - well east of satellite - on a 5m dish, even more unusual.) "Job hunting? Try the following: 'Satellite installation engineer required to support the British Forces Broadcasting Service ... in Iraq and Afghanistan.' It is a UK number: Suzie Curle at (0)1494 878874." (**Simon**) "Radio on internet has taken giant step forward at radiotime.com where one can find more than 20,000 (!) totally different radio stations outside the USA (plus of course those in USA) with links and scheduling information: a tremendous resource!" (**Billy T.**) "Alternative source for building your own FM radio station transmitter to serve a local area (10km or under): www.veronica.co.uk/mpxkit.htm." (**Paul B.**) "I am presently getting nightly TVNZ 6PM news through PAS-2, 3901Hz (California Bouquet) as well as

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www.satlinknz.co.nz - Peter - 0274937025

These firms are available to do contract dish installs

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C.B. Communications, **Sigatoka** (Ph6520227; cbcom@connect.com.fj)
Safeway Electronics Ltd, **Suva + Lautoka + all islands** (Ph 3395300/6666822; safeway@connect.com.fj)
SATSHEK Communications, **Suva** (Ph3307933; parmarbros@connect.com.fj)

French Polynesia

Telexpert-Tahiti, **all of French Polynesia** (Ph 689 77 11 25; Fax 689 83 89 00; telexpert@mail.pf) (*)

New Zealand:

Tauranga TV Svcs Ltd, western **Bay of Plenty** (ethnic Ku packages) (Ph 07 578 7276; dave-tts@clear.net.nz)
Raycom, **Coromandel Peninsula/Waihi/Tairua** (B1 FTA) (Ph 07 864 8083; raycom@slingshot.co.nz)
Frontline Electronics, **Mosgiel** region (ethnic Ku packages) (Ph 03 489 4001)
Advanced Aerials, **Napier/Hawkes Bay**, comcls (Ph06835 6618/021 272 6618; advancedaerials@xtra.co.nz)(*)
Nelson TV & Video Svcs, all **Nelson Bays** (Ph 03 548 0304; ntv@tasman.net)
Rexels AV Electronics Ltd, **Palmerston N, Manawatu, Hawke's Bay, Wanganui** (Ph 06 357 6186; rsi.blair@xtra.co.nz)
John Stewart, **southland** including Otago (john.s@tritec.co.nz)
The Antenna Man, **Taranaki** (Ph 06 758 1633; antenna.man@xtra.co.nz)
Quality Pics, entire **Waikaito** region (Ph 0800 007 667; maxnkay@xtra.co.nz)
Smartzone, **Wellington-Wairarapa-Palmerston N** (C+Ku) (Ph 029 289 6333; info@smartzonesystems.co.nz)
Homestead HiTech, **Wellington, Masterton-Levin** (PAS-2, B1, B3) fitzgera@ihug.co.nz)

Australia Wide

Regional Outcomes (60+ locations, **all states, territories**) (03 9923 7333; installs@regionaloutcomes.co.au) (*)

New South Wales:

Woolgoola Antenna Service, **Coffs Harbour** (50km radius) (Ph 0266561889; woopaerials@iprimus.com.au)
Town & Country Antennas, 60km radius **Murwillumbra/Tweeds Heads** (Ph 02 6672 8595)
Newcastle Satellite, **Newcastle + Lwr Hunter Vly** (Ph 0249614449; satellites@netcentral.com.au)
Home Satellite TV, 40km radius **Port Macquarie** (Ph 02 6584 3838; kazbah25@optusnet.com.au)
Goodcom Communications P/L, 100km radius of **Walcha** (Ph 02 6777 1044; goodcom@northnet.com.au)

Northern Territory

ALLSAT TV, **Darwin and NT**; (Ph 08-8927 1300, 04 3771 0797; allsat.tv@pacific.net.au) (*)

Queensland:

Teleworks, 100km of **Cairns** (C + Ku). (Ph 0412 84115; rajvrm@aol.com)
Cape York Electronics, **Cooktown and 'the cape'** (started 1970s) (Ph 07 40 695 252; cyectn@tpg.com.au)
Phil's Antenna Systems, 100km radius of **Hervey Bay** (C+Ku since 1996). (Ph 0741 256 273)
Rick Dalton TV & Satellite, 100km of **Kawana Waters** (C + Ku). (Ph 07 5493 4343; rick@antechtv.com.au)
Videotronics Mackay, **Mackay/Whitsundays** radius 200km. (Ph 07 495 575 052; sales@videotronics.com.au)
Tableland Ant Svcs, **Malanda, Atherton T'lands + 'Gulf/ Cape'** (Ph 07 40966262; julieandlee@ledanet.com.au)

South Australia

Central Eyre Comms, **Arno Bay-Eyre Penins.** (Ph 08 8628 0203; centraleyrecomms@ozemail.com.au)

Tasmania:

.65 Electronics, **Launceston and Northern Tasmania** (Ph 03 63 330820; sales@65group.com)

Victoria:

Riviera Satellite Antenna Svcs, 100km radius **Bairnsdale** (Ph 03 5152 4884; gillhooleystv@net-tech.com.au)
Leden Communications, (100km radius) **Glengarry** (Ph 0427 745105; leden@netspace.net.au)
Geoff's Communications, 60km radius **Korumburra** (Ph 0408 582010; gwyhoon@tpg.com.au)
Foreign Satellite TVP/L, **Melbourne (region)** C+Ku since 1995 (Ph 040445509; joe12@dodo.com.au)
H and J Instruments, (100km radius) **Wodonga**, C and Ku since 1970 (Ph 02 6027 1574)

Solomon Islands

Satellite Solutions, **Honiara + all Solomon Islands** (since 1994) (Ph 677 25589; satsol@solomon.com.sb)

Thailand:

JSAT tv/Jon Clarke, **ex-pat community - nationwide** (Ph +661 513 5418; info@jsat.tv)

To be listed here, tell us: 1/name of your business or your name, 2/ your home town and radius-distance covered from same, 3/ your telco, 4/ your e-mail. Send to skyking@clear.net.nz, or fax to ++64 9 406 1083 or mail to SatFACTS, PO Box 330, Mangonui, Far North, NZ. No, there is no charge to be listed **but you must** be a SatFACTS subscriber! (*) - NEW or modified this month.)

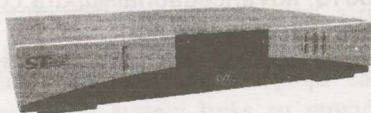
BBC here also FTA. We are buying Rugby feeds through Fiji TV's I701 C-band service using a 2.4m dish for reuse on our Pago Pago TV station." (BHyman, American Samoa). "Sky NZ has switched to a new custom LNBf which has a pair of reception probes inside the feed throat spaced for 4 degree

satellite spacing (such as 156 and 160E). It also has a single LO (local oscillator) of 10.750 but a single downline to the STB. To check correct alignment, installers have been using C1's 12.407V and 12.519V B1" (CSutton) (Editor's note: This would be in preparation for activation of D1 at the B1

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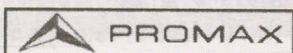
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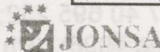
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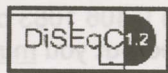
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spot [now 'sometime' in 2006] and the co-positioning of D2 at 156E along with C1 [also, 'sometime in 2006']. The concept appears to be, transponders can be fed into NZ from either satellite [telling us something about how D2 will be configured] but the reverse of that should also be true; either D1 @ 160 or D2 [+C1] @ 156 can feed into Australia. An engineering 'case' could be made that when all of this is in place, Sky NZ and Foxtel could then be combined into a single service, one primary [Sydney] and one secondary [Auckland] production centre [nothing says the reverse could not also be the case although how long Australia would stand for having their pay-TV originate in Auckland could be an interesting argument]. Neither Sky nor News Corp, of course, is admitting any of this may happen.) "Satdirectory continues to be head and shoulders above all other in-depth satellite programmer source references. If you have not yet become a regular on their list, contact newsletter@satdirectory.com; proudly, an Australian creation." (Stanley) "Auckland's non-profit community service TV channel (41: Triangle TV) has expanded terrestrial coverage through newly activated channel 42 at the northern metro area Pinehill retransmission site (a previously installed channel 52 translator covers the Remuera segment of metro-Auckland as well)." (JBlackman, NZ) "Disney with assistance of Sprint network is offering new 'family based' mobile telephone service (in USA). Co-owned ESPN is also planning a mobile phone service geared towards sports fans. What does all of this mean? Cellphones with added 'bonus' programme delivery as part of a package - Disney video cartoons for 'family' and sports coverage on ESPN. The telephone business just became more competitive." (Ronnie) "BSkyB is entering the Internet movie and sporting event download market in October. Connection will require broadband web connection and of course PC with suitable software. This could be a model for similar News Corp Pacific franchises (Foxtel, Sky NZ)." (Edward) "Austar has added the Aurora radio service channels to subscription mix but not all areas will have access to the same radio services (access determined by your location; SA, for example, have ABC Local SA on ch 48 and 891 ABC Adelaide on ch 49 while those in Qld now have 48-ABC N Qld, 49- ABC W Qld and 50-612 ABC Brisbane." (NS, NSW) "Dreambox without wires? I have seen a Korean product that uses 900 MHz link to connect one 'authorised-card-carrying' STB to second (or more) non-carded STBs. Coverage? Depends upon 900 MHz integrity but certainly 1 km!" (James, Victoria)

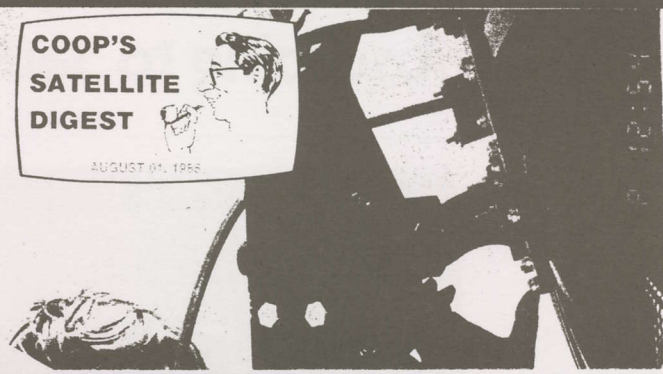
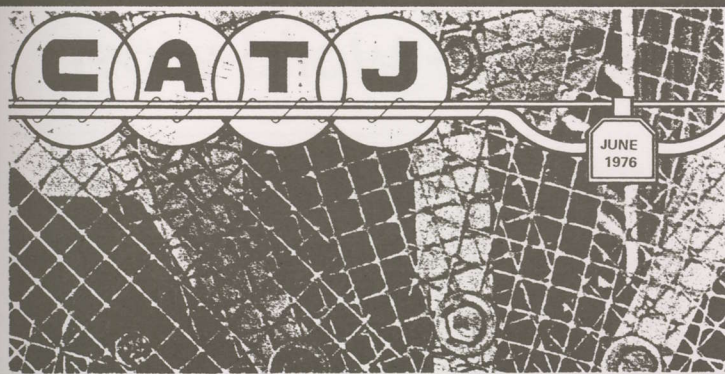
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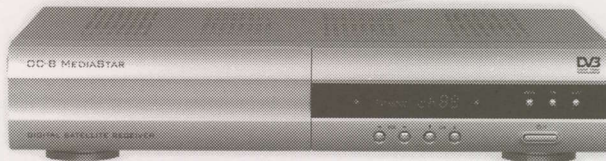
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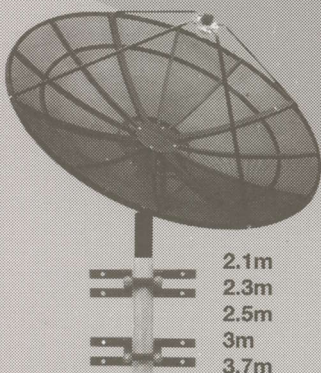
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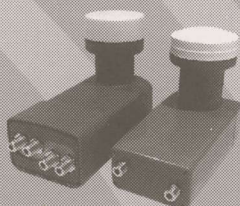


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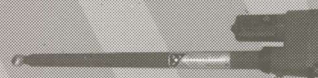


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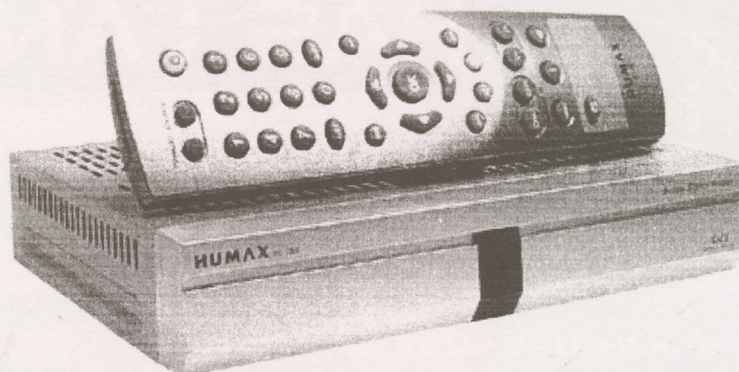
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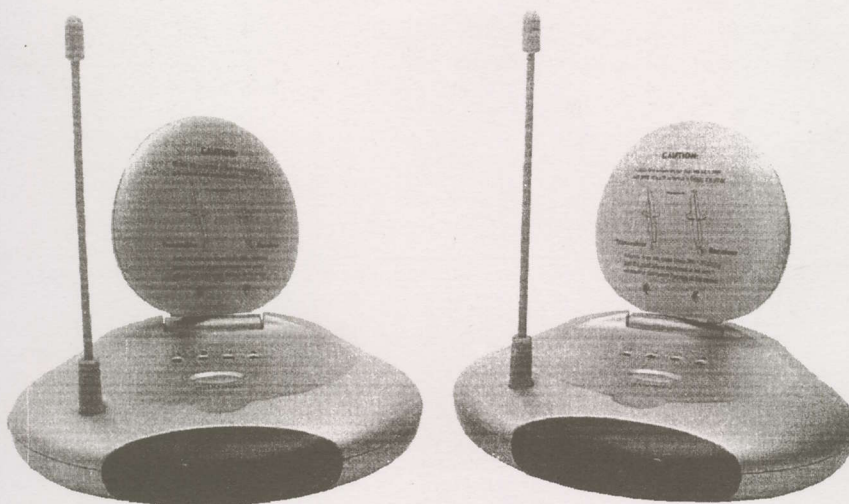


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